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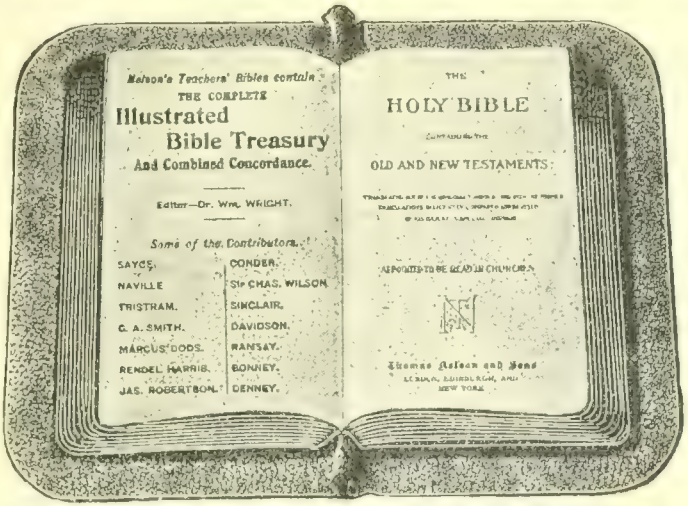

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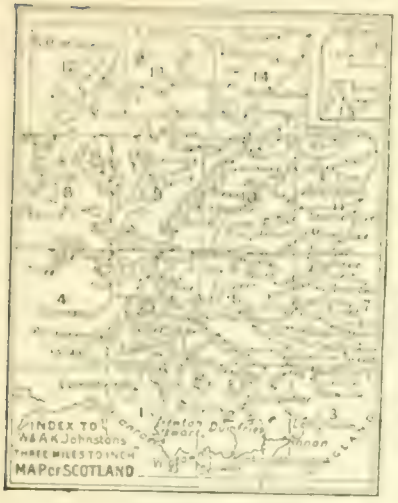

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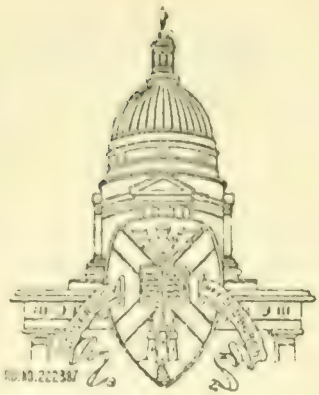

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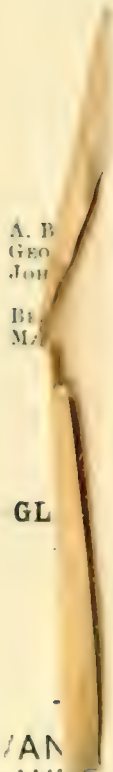

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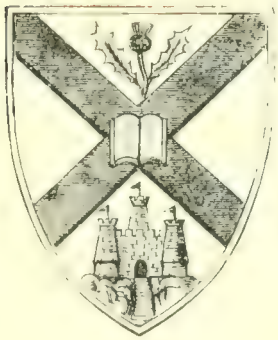

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[1] A full list of the chief Benefactors, with the purposes of their benefactions is given at pages 835-848.

the proceedings of the University Court from 1st May 1898 to 1st May 1899; and a list of the University Societies.

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Contents.

	PAGE
THE CALENDAR	xiii-xxvii
CALENDAR FOR 1900-1901	xxviii
NAMES AND ADDRESSES OF THE PRINCIPAL AND PROFESSORS	xxix
NAMES AND ADDRESSES OF PROFESSORS EMERITI AND RESIGNED	xxx
NAMES AND ADDRESSES OF LECTURERS	xxxi
APPEAL FOR FUNDS FOR UNIVERSITY PURPOSES	xxxiii
UNIVERSITY OFFICERS	1-9
THE UNIVERSITY—	
Constitution	10
Chancellor	10
Vice-Chancellor	11
Rector	11
Representative in Parliament	12
University Court	12
University Committee of Privy Council	15
Curators of Patronage	15
Representative in General Medical Council	16
Principal	16
Senatus Academicus	17
Faculties	18
Faculty of Arts	18
Faculty of Science	20
Faculty of Divinity	21
Faculty of Law	22
Faculty of Medicine	23
Faculty of Music	24
General Council of the University	25
Students' Representative Council	26
Matriculation	27
Sponsio Academica	28
Non-Matriculated Extra-Academical Students	29
University Entrance Fee for Non-Matriculated Students	29
Discipline	30
University Examiners for Degrees	30
Graduation Ceremonials; Precedence	30
Academic Costume	30
REGULATIONS REGARDING —	
(1) Absence of Professors	31
(2) Absence of Examiners	32
(3) Applications for Examinerships	32

PAGE
(4) Opening of New Classes 33
(5) Recognition of Extra-Academical Teachers . . 33
UNIVERSITY BUILDINGS 34
(1) University (Old) Buildings 35
Dome 37
(2) University New Buildings 37
M'Ewan Hall 39
(3) Reid School of Music 41
UNIVERSITY LIBRARY 41
Library Committee 41
Regulations relative to General Management of the Library 43-50
Reading Rooms 50
Donations and Bequests during last year . . . 847
THEOLOGICAL LIBRARY 51
SELLAR AND GOODHART CLASSICAL LIBRARY . . 52
HONOURS PHILOSOPHICAL LIBRARY 52
HISTORY LIBRARY 53
PORTRAITS AND BUSTS 53
TORRIE FINE ART COLLECTION 54
MUSEUMS 55
ROYAL BOTANIC GARDEN 57

I. FACULTY OF ARTS.

PROGRAMME OF CLASSES, LABORATORIES, FEES, &c. . 58
COURSES OF LECTURES 65
CLASS PRIZE LISTS, 1898-99 439
ADVICE TO STUDENTS 104
REGULATIONS FOR GRADUATION— 105
Preliminary Examinations 105
Ordinary Degree 108
Degree with Honours 109
Boards of Studies 112
Regulations regarding the Instruction and Examination of Women 114
Regulations for Special Study and Research, and for Research Fellows 115
Regulations for Higher Degrees in Arts and Science (D.Sc., D.Phil., and D.Litt.) . . . 117
Joint Board of Examiners for Preliminary Examination . 429
Fee, and dates of entering for Preliminary Examinations 121
Time-Table for Preliminary Examinations . . 122-124
Fees and dates of entering for Examinations for M.A., &c. 124
Time-Table of Examinations for M.A. . . . 126-128
Outline of Examinations for Ordinary Degree for 1899-1900 128

PAGE

Outline of Examinations for Degree with Honours for 1900 and 1901 136
REGULATIONS FOR SCHOOLMASTER'S DIPLOMA . . 145
DIPLOMA CONFERRED, 1898-99 154
RESULT OF COMPETITIVE EXAM. FOR BURSARIES—HONOURS LIST, October 1898 147
EXAMINATION PAPERS FOR DEGREES IN 1898-99 . .
Preliminary Examin. Papers for Degrees in Arts, Science, Law (B.L.), and Music 489
Exam. Papers for First Year Bursaries . . 489, 555
Examination Papers for Ordinary Degree of M.A. . 585
Do. for Schoolmaster's Diploma . . 623
Do. for Degree of M.A. with Honours . 642
HIGHER DEGREES IN ARTS CONFERRED . . . 149
SPONSIO ACADEMICA 150
GRADUATES IN ARTS—HONOUR LISTS, 1889-1899 . . 150
GRADUATES IN ARTS, 1898-99 153
BURSARIES, LIST OF 155
PRIZES 169
SCHOLARSHIPS 171
FELLOWSHIPS, &C. 184
DICKSON TRAVELLING FUND 185
MORAY ENDOWMENT FOR RESEARCH . . . 186
FELLOWSHIPS, SCHOLARSHIPS, PRIZES, BURSARIES, &C., OPEN IN 1899-1900 187
FUNDS FOR SPECIAL STUDY AND RESEARCH . . . 189

II. FACULTY OF SCIENCE.

PROGRAMME OF CLASSES, &C. 199
LABORATORIES, &C. 204
COURSES OF LECTURES 206
CLASS PRIZE LISTS 453
REGULATIONS FOR GRADUATION— 227
PURE SCIENCE 227, 229
Preliminary Examination 227
Regulations for B.Sc. 229
Regulations for D.Sc. 233
Regulations for Special Study and Research, and for Research Fellows 235
Regulations for Graduation of Women . . . 236
Outline of Subjects of Examinations in Pure Science . 238
ENGINEERING 243
Regulations for B.Sc. 243
Outline of Subjects of Examination for B.Sc. . . 247
Regulations for D.Sc. 246

PAGE
PUBLIC HEALTH 249
Regulations for B.Sc. 249
Schedules of the Subjects of Examination for B.Sc. . 251
Regulations for D.Sc. 253
AGRICULTURE 254
Regulations for Graduation 254
Outline of Subjects of Examination . . . 257
FEES FOR GRADUATION 261
TIME-TABLE OF EXAMINATIONS 262
EXAMINATION PAPERS IN PURE SCIENCE, &c. . . 742
LIST OF D.Sc. 265
GRADUATES IN SCIENCE, 1898-99 266
FELLOWSHIPS, SCHOLARSHIPS, &c. 267
DICKSON TRAVELLING FUND 185
MORAY ENDOWMENT FOR RESEARCH 186
FELLOWSHIPS, SCHOLARSHIPS, &c., OPEN IN 1899-1900 . 274

III. FACULTY OF DIVINITY.

PROGRAMME OF CLASSES, &c. 277
CURRICULUM FOR MINISTRY IN THE CHURCH OF SCOTLAND 278
COURSES OF LECTURES 279
CLASS PRIZE LISTS, 1898-99 455
REGULATIONS FOR GRADUATION 284
OUTLINE OF SUBJECTS OF EXAMINATION, 1899-1900 . 285
FEES FOR EXAMINATIONS 286
TIME-TABLE OF EXAMINATIONS 286
EXAMINATION PAPERS FOR DEGREE OF B.D. . . 776
GRADUATES IN DIVINITY (B.D.), 1898-99 . . . 287
HONORARY DEGREE OF DOCTOR OF DIVINITY . . 287
BURSARIES, PRIZES, SCHOLARSHIPS, &c. . . . 289
DICKSON TRAVELLING FUND 185
MORAY ENDOWMENT FOR RESEARCH 186
BURSARIES, PRIZES, SCHOLARSHIPS, &c., OPEN IN 1899-1900 299

IV. FACULTY OF LAW.

PROGRAMME OF CLASSES 302
COURSES OF LECTURES 303
CLASS PRIZE LISTS, 1898-99 457
REGULATIONS FOR GRADUATION— 308
Degree of Bachelor of Laws (LL.B.) . . . 308
Degree of Bachelor of Law (B.L.) . . . 310
Preliminary Examination for B.L. . . . 311
Examinations for LL.B. and B.L. . . . 311
Fees for LL.B. and B.L. 312
Time-Table of Examinations 313

PAGE

EXAMINATION PAPERS FOR LL.B. AND B.L. . . . 787
LIST OF LL.B. 314
Do. B.L. 315
DOCTOR OF LAWS (LL.D.), LIST OF 316
BURSARIES 320
SCHOLARSHIPS, &C. 321
DICKSON TRAVELLING FUND 185
MORAY ENDOWMENT FOR RESEARCH 186
SCHOLARSHIPS, BURSARIES, PRIZES, &C., OPEN IN 1899-1900 324

V. FACULTY OF MEDICINE.

PROGRAMME OF CLASSES, &C. 327
LABORATORIES 331
REGISTRATION OF STUDENTS 368
ORDER OF STUDY RECOMMENDED 368
COURSES OF LECTURES 334
CLASS PRIZE LISTS, 1898-99 459
REGULATIONS FOR GRADUATION— 353
Preliminary Examination 353, 367, 432
Additional Regulations of Joint Board for Preliminary Examination 429
Examinations exempting from Preliminary Examination . 435
Period and Course of Professional Education . 354, 368
Professional Examinations for M.B. and Ch.B., &c. . 360
Regulations for M.D. 362
Regulations for Ch.M. 364
Regulations for the Education and Graduation of Women 365
Regulations as to Class Examinations . . . 370
Certificates of Attendance on Classes . . . 371
Outline of Subjects for First Professional Examination . 372
Honours at Professional Examinations . . . 374
Sponsio Academica in Medicine 374
Fees for Examinations 375
Time-Table of Preliminary Examination . . . 367
Time-Table of Professional Examinations, &c. . . 376
Extra-Academical Teachers recognised by the University . 379
Graduation under Old Regulations . . . 383
Time-Table of Examinations, Fees, &c. . . 384, 386
Regulations for Special Study and Research, and for Research Fellows 387
Regulations for Degree of D.Sc. 388
Gold Medallists (M.D.) 390
Doctors of Medicine, 1898-99 391
Graduates (M.B., C.M.) with Honours . . . 395
Graduates (M.B., Ch.B.) with Honours . . . 397
Graduates (M.B., C.M.), 1898-99 398
Graduates (M.B., Ch.B.) 1898-99 399

PAGE
PRELIMINARY EXAMINATION PAPERS . . . 571
PROFESSIONAL EXAMINATION PAPERS . . . 708
FELLOWSHIPS, &c. 402
SCHOLARSHIPS 404
BURSARIES 411
PRIZES 415
DICKSON TRAVELLING FUND 185
MORAY ENDOWMENT FOR RESEARCH 136
FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES, OPEN IN 1899-1900 418

VI. FACULTY OF MUSIC.

COURSES OF LECTURES 422
HISTORICAL CONCERTS 423
CLASS PRIZE LISTS 487
REGULATIONS FOR DEGREES IN MUSIC—
1. Bachelor of Music (Mus. B.) 423
2. Doctor of Music (Mus. D.) 424
3. Graduates (Mus. B.) 427
4. Honorary Doctors of Music (Mus. D.) . . . 427
SUBJECTS OF PRELIMINARY EXAMINATION . . . 426
TIME-TABLES OF EXAMINATIONS, FEES, &c. . . . 426
EXAMINATION PAPERS FOR MUS. B. 812
SCHOLARSHIP 427

NEW FOUNDATIONS 829
BENEFACTORS OF THE UNIVERSITY . . . 835-848
BEQUESTS AND DONATIONS in 1898-99 . . . 846
ABSTRACT OF ACCOUNTS OF THE UNIVERSITY, 1898-99 . 849
UNIVERSITY COURT—Abstract of Proceedings of, 1898-99 . 860

MISCELLANEOUS.

I. EXAMINATION OF CANDIDATES FOR THE ARMY . 869
II. SYLLABUS OF SUBJECTS OF EXAMINATION FOR STUDENTS OF DIVINITY 869
III. EDINBURGH UNIVERSITY UNION . . . 870
IV. STATISTICS OF RECTORIAL ELECTIONS . . 870
V. ROYAL MEDICAL SOCIETY 871
VI. INTERNATIONAL ACADEMIC COMMITTEE . . 871
VII. ASSOCIATION FOR THE BETTER ENDOWMENT OF THE UNIVERSITY OF EDINBURGH . . . 871
VIII. EDINBURGH UNIVERSITY SOCIETIES AND CLUBS . 872
RESIDENCES AND BOARD—
1. For Men Students 878
2. For Women Students 879

INDEX 880

The Calendar.

1899—OCTOBER, 31 DAYS.

1	S	**ANNUS ACADEMICUS** begins. First day for payment of **MATRICULATION** fee. Practical Anatomy begins.
2	M	Annual Inspection of Library. All books to be returned before this date. Library closed for lending till 9th inst. **PREL. AND BURSARY EXAMS.** begin on September 29th. See Time-Tables, pages 122, 262, 367.
3	Tu	Public Health Laboratory Course begins.
4	W	Last day for Names of Candidates for Degrees in Arts and Science, and for B.L. Preliminary on M.A. Standard to be given in, Certificates examined, and Fees paid. Last day for Names of Candidates for First Year Law Bursaries to be given in.
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	Library open during Winter Session from 10 to 4: Reading Rooms in Old Buildings, from 10 to 4 and also 8 to 10: Saturdays 10 to 1. Reading Room in New Buildings open from 9 to 5: Saturdays 9 to 12 during Winter Session.
10	Tu	Examinations for M.A., and for B.L. Preliminary on M.A. Standard begin. See Time-Table, page 126.
11	W	Last day for Names of Candidates for B.D. to be given in, Certificates examined, and Fees paid.
12	Th	Examinations for Degrees in Science begin. See Time-Table, pages 263 and 264.
13	Fr	
14	Sa	Last day for entering Names for Second and Third Year Bursaries in Law.

15	S	
16	M	Meeting of University Court at 4 P.M. **CLASSES IN FACULTY OF MUSIC OPEN.**
17	Tu	**CLASSES IN THE FACULTIES OF ARTS, SCIENCE, LAW, AND MEDICINE OPEN.** Examinations for B.D. begin. See Time-Table, page 287. Court of Session sits.
18	W	
19	Th	
20	Fr	
21	Sa	*Meeting of Senatus Academicus* at 2 P.M.; Standing Committees to be appointed.
22	S	
23	M	Last day for Names of Candidates for Examinations for Degrees in Law to be given in, Certificates examined, and Fees paid.
24	Tu	**CLASSES IN FACULTY OF DIVINITY OPEN.**
25	W	
26	Th	
27	Fr	*Meeting of General Council at 3 o'clock.* **ELECTION OF TWO ASSESSORS.**
28	Sa	
29	S	
30	M	Examinations for Degrees in Law begin. See Time-Table, page 313.
31	Tu	

1899—NOVEMBER, 30 DAYS.

1	W	
2	Th	
3	Fr	Examinations for Divinity Bursaries begin.
4	Sa	**ELECTION OF LORD RECTOR.**
5	S	
6	M	
7	Tu	
8	W	
9	Th	
10	Fr	
11	Sa	Martinmas.
12	S	
13	M	*Meeting of University Court at* 4 P.M.
14	Tu	Certificates for Bursaries, &c., granted by Deans.
15	W	Fellowships, Scholarships, Bursaries, paid by Factor.
16	Th	
17	Fr	
18	Sa	
19	S	
20	M	
21	Tu	
22	W	
23	Th	
24	Fr	
25	Sa	*Meeting of Senatus Academicus at* 2 P.M.
26	S	
27	M	
28	Tu	
29	W	
30	Th	Registration of Members of General Council for Register of 1900 ends.

1899 —DECEMBER, 31 DAYS.

1	Fr	Last day for lodging Theses and for payment of Fees for D.Sc., D.Phil., and D.Litt.
2	Sa	
3	S	
4	M	
5	Tu	
6	W	
7	Th	
8	Fr	
9	Sa	
10	S	
11	M	
12	Tu	
13	W	
14	Th	
15	Fr	
16	Sa	*Meeting of Senatus at* 2 P.M.:— (1) Election of Managers for Royal Infirmary. (2) Report to Widows' Fund. (3) Arrangements for Winter and Summer Sessions, 1900-1901.
17	S	
18	M	*Meeting of University Court at* 4 P.M.
19	Tu	
20	W	
21	Th	Classes meet for last time before Christmas Vacation.
22	Fr	After this date University Offices open from 10 A.M. to 1 P.M. till 9th January: closed on Christmas, New Year's day, and Saturdays.
23	Sa	
24	S	
25	M	**CHRISTMAS DAY.**
26	Tu	Library, including Reading Rooms at Old Buildings, open from 10 to 1 till 9th January: closed on Saturdays. Reading Room, New Buildings, closed for same period.
27	W	
28	Th	
29	Fr	
30	Sa	
31	S	

1900—JANUARY, 31 DAYS.

1	M	
2	Tu	
3	W	
4	Th	
5	Fr	
6	Sa	
7	S	
8	M	
9	Tu	Classes meet after Christmas Vacation.
10	W	
11	Th	
12	Fr	
13	Sa	
14	S	
15	M	*Meeting of University Court at* 4 P.M. Appointment of Examiners.
16	Tu	
17	W	
18	Th	
19	Fr	
20	Sa	
21	S	
22	M	*Meeting of University Court for hearing Registration Appeals (if any) at* 4 P.M.
23	Tu	
24	W	
25	Th	
26	Fr	*Meeting of Senatus Academicus at* 2 P.M. :—
27	Sa	(1) Report of D.D. Committee to be presented.
28	S	(2) Report of LL.D. Committee to be presented.
29	M	(3) Annual Report on University Library to be given in.
30	Tu	
31	W	

1	Th	
2	Fr	**CANDLEMAS.**
3	Sa	
4	S	
5	M	
6	Tu	
7	W	
8	Th	
9	Fr	
10	Sa	
11	S	
12	M	*Meeting of University Court at* 4 P.M. Holiday in Faculty of Arts.
13	Tu	
14	W	
15	Th	
16	Fr	
17	Sa	
18	S	
19	M	
20	Tu	
21	W	
22	Th	
23	Fr	
24	Sa	*Meeting of Senatus Academicus at* 2 P.M. :— (1) Report of D.D. Committee to be moved. (2) Report of LL.D. Committee to be moved. (3) Resolution to Elect Member of General Assembly.
25	S	
26	M	
27	Tu	
28	W	

1900—MARCH, 31 DAYS.

1	Th	Last day for Names for Preliminary Examinations to be given in and Fees paid.
2	Fr	Last day for Names of Candidates for Degrees in Arts, for Schoolmaster's Diploma, and for B.L. Preliminary on M.A. Standard to be given in and Fees paid.
3	Sa	*Regulations as to late entries for Chemistry, Botany, and Zoology are the same as in the Faculty of Medicine.*
4	S	
5	M	Last day for Names of Candidates for Degrees in Law to be given in and Fees paid.
6	Tu	Last day for Names for First Professional Examination in Medicine, and for Examinations for Degrees in Science to be given in and Fees paid. *Regulations as to late entries for Chemistry, Botany, and Zoology, for First Science Examination are the same as in the Faculty of Medicine.*
7	W	
8	Th	
9	Fr	
10	Sa	Last day for Names for Examinations for Degrees in Music to be given in, Certificates examined, and Fees paid.
11	S	
12	M	*Meeting of University Court at* 4 P.M Last day for Names for Second Professional Examination in Medicine to be given in and Fees paid.
13	Tu	
14	W	Last day for Names of Candidates for Scholarships in Arts and Science to be intimated.
15	Th	Applications for Grants from Dickson Travelling Fund to be lodged. Applications for Grants from Moray Bequest Fund to be lodged.
16	Fr	**CLASSES IN FACULTY OF DIVINITY CLOSE.** Last day for Names for Third Professional Examination in Medicine (New Regulations) to be given in and Fees paid.
17	Sa	**CLASSES IN FACULTY OF LAW CLOSE.**
18	S	
19	M	Examinations for M.A., and for Degrees in Law begin. See Time-Tables, pages 126 and 313.
20	Tu	Last day for Names for Examinations in Divinity to be given in, Certificates examined, and Fees paid. Names for Final Examination in Medicine (Old Regulations) to be given in and Fees paid.

21	W	
22	Th	
23	Fr	**CLASSES IN FACULTY OF MEDICINE CLOSE.** Certificates for First Professional and Science Degrees Examinations to be examined from 10 to 3. Preliminary Examinations begin. See Time-Table, pages 123, 262, 368.
24	Sa	Practical Chemistry Examinations for Degrees in Arts, Science, and Medicine begin. Certificates for Second Professional Examination to be examined from 9 to 2. *Meeting of Senatus Academicus at* 2 P.M. :— (1) Member of Assembly to be elected.
25	S	(2) Acceptances of Honorary Degrees.
26	M	First Professional Written Examination in Medicine, B.Sc. Examinations, and Science Subjects for M.A. begin. See Time-Tables, pages 127, 263, 376. Examinations for Degrees in Music begin. See Time-Table, page 427.
27	Tu	B.D. Examinations begin. See Time-Table, page 287.
28	W	Second Professional Examinations begin. See Time-Tables, pages 377, 384. Examinations for M.A. with Honours begin. See Time-Table, page 127.
29	Th	Certificates for Third Professional Examination (New Regulations) and for Final Examination (Old Regulations) to be examined from 10 to 3.
30	Fr	**CLASSES IN THE FACULTIES OF ARTS AND SCIENCE CLOSE.** Certificates for M.A. Examinations in April to be examined before 4 P.M. Third Professional Examination (New Regulations). See Time-Table, page 377.
31	Sa	

1900—APRIL, 30 DAYS.

1	S	
2	M	
3	Tu	
4	W	
5	Th	
6	Fr	
7	Sa	
8	S	
9	M	
10	Tu	
11	W	
12	Th	
13	Fr	**GOOD FRIDAY.** HOLIDAY.
14	Sa	*Meeting of Senatus in M'Ewan Hall at* 9.30 A.M. **GRADUATION CEREMONIAL IN DIVINITY, LAW, ARTS, AND SCIENCE, IN M'EWAN HALL, AT 10 A.M.** **COMMEMORATION SERVICE IN ST GILES'S AT 12.** Senatus Offices open from 10 to 1 till 1st May: closed on Saturdays. Library closed.
15	S	**EASTER SUNDAY.**
16	M	*Meeting of University Court at* 4 P.M. **EDINBURGH HOLIDAY.**
17	Tu	Reading Room, New Buildings, open from 10 A.M. to 1 P.M. till 23rd April: closed on Saturday.
18	W	Names of Candidates for Final Exam. in Medicine (New Regulations) to be given in and Fees paid.
19	Th	Certificates for Final Exam. (New Regulations) to be examined from 10 to 1.
20	Fr	
21	Sa	
22	S	
23	M	Inspection of Library. All books to be returned before this date. Library closed for lending till 30th inst.
24	Tu	
25	W	
26	Th	
27	Fr	
28	Sa	
29	S	
30	M	Last day for lodging Theses for M.D. and for Ch.M.

1900—MAY, 31 DAYS.

		SUMMER SESSION OPENS.
		Practical Anatomy begins.
		Clinical Medicine Exams. begin.
1	Tu	Library and Reading Rooms in Old Buildings open from 10 to 3 during Summer Session: Saturdays 10 to 1. Reading Room in New Buildings open from 9 to 5: Saturdays 9 to 12.
2	W	*Meeting of University General Council at* 3 P.M.
3	Th	
4	Fr	
5	Sa	
6	S	
7	M	
8	Tu	
9	W	
10	Th	
11	Fr	
12	Sa	
13	S	
14	M	*Meeting of University Court at* 4 P.M. **LAW CLASSES OPEN.**
15	Tu	Whitsunday.
16	W	
17	Th	
18	Fr	Fellowships, Scholarships, Bursaries paid by Factor.
19	Sa	
20	S	
21	M	
22	Tu	
23	W	
24	Th	Queen Victoria born, 1819. General Assembly meets. HOLIDAY.
25	Fr	*Meeting of Senatus Academicus at* 3 P.M.
26	Sa	
27	S	
28	M	
29	Tu	
30	W	
31	Th	

1900—JUNE, 30 DAYS.

1	Fr	
2	Sa	
3	S	
4	M	
5	Tu	
6	W	
7	Th	
8	Fr	
9	Sa	
10	S	
11	M	
12	Tu	
13	W	
14	Th	
15	Fr	
16	Sa	
17	S	
18	M	*Meeting of University Court at* 4 P.M. Final Prof. Written Exam. begins. See Time-Table, pages 378, 384.
19	Tu	
20	W	Accession of Queen Victoria, 1837. Clinical Surgery Exam. for M.B. begins.
21	Th	
22	Fr	Last day for Names to be entered and Fees paid for Candidates for Clinical Examinations for M.D. and for Ch.M.
23	Sa	
24	S	Midsummer Day.
25	M	
26	Tu	
27	W	
28	Th	Queen's Coronation, 1838.
29	Fr	*Meeting of Senatus Academicus at* 3 P.M.
30	Sa	

1900—JULY, 31 DAYS.

1	S	
2	M	
3	Tu	
4	W	
5	Th	Last day for Names of Candidates for Examinations for Degrees in Arts and Science, and for First Professional Examination in Medicine to be given in and Fees paid.
6	Fr	*The Regulations of the Faculty of Medicine as to late entry fees applies to all entries for Chemistry, Botany, and Zoology.* Clinical Medicine Examination for M.D. (New Regulations) begins at 9.45 A.M.
7	Sa	Examination for Ch.M. begins.
8	S	
9	M	
10	Tu	
11	W	
12	Th	Last day for Names of Candidates for Second Professional Examination to be given in and Fees paid.
13	Fr	
14	Sa	
15	S	
16	M	*Meeting of University Court at* 4 P.M.
17	Tu	Names of Candidates for Third Professional Examination in Medicine (New Regulations) to be given in and Fees paid.

18	W	Names to be entered for Graduation, and Registration Fee paid on or before this date. Second Professional Examination Certificates to be examined from 10 to 3.
19	Th	Certificates for First Professional and Arts and Science Examinations to be examined from 10 to 3.
20	Fr	Second Professional Examination in Medicine begins. See Time-Tables, page 377. SUMMER SESSION ENDS.
21	Sa	Practical Chemistry Examination for Degrees in Arts, Science, and Medicine begins.
22	S	
23	M	Written Examinations for Degrees in Arts (Dept. of Science), for Degrees in Science, and First Professional Examination in Medicine begin. See Time-Tables, pages 128, 264, 265, 377.
24	Tu	Certificates for Third Professional Examination (New Regulations) to be examined from 10 to 3.
25	W	Third Professional Examination. See Time-Table, page 378.
26	Th	
27	Fr	*Meeting of Senatus Academicus at* 3 P.M. Candidates for Degrees to be approved.
28	Sa	**GRADUATION CEREMONIAL IN MEDICINE, SCIENCE, &c., AT 10 a.m.** Meeting of Senatus in M'Ewan Hall at 9.30 A.M.
29	S	
30	M	University Offices open from 10 to 1 till 1st October: closed on Saturdays.
31	Tu	

1900—AUGUST, 31 DAYS.

1	W	**LAMMAS.** Library and Reading Rooms in Old Buildings open from 10 to 1 till 1st September: closed on Saturdays. Reading Room, New Buildings, closed during same period.
2	Th	
3	Fr	
4	Sa	
5	S	
6	M	
7	Tu	
8	W	
9	Th	
10	Fr	
11	Sa	
12	S	
13	M	
14	Tu	
15	W	
16	Th	
17	Fr	
18	Sa	
19	S	
20	M	
21	Tu	
22	W	
23	Th	
24	Fr	
25	Sa	
26	S	
27	M	
28	Tu	
29	W	
30	Th	
31	Fr	

1900 SEPTEMBER, 30 DAYS.

1	Sa	Library and Reading Rooms in Old Buildings open from 10 to 3: Saturdays 10 to 1. Reading Room, New Buildings, open from 10 to 1: closed on Saturdays.
2	S	
3	M	
4	Tu	
5	W	
6	Th	
7	Fr	
8	Sa	
9	S	
10	M	
11	Tu	
12	W	
13	Th	
14	Fr	
15	Sa	
16	S	
17	M	**EDINBURGH HOLIDAY.**
18	Tu	
19	W	Last day for Names of Candidates for Preliminary Examinations to be given in and Fees paid.
20	Th	Last day for entering for University Bursaries in the Faculties of Arts, Science, and Medicine.
21	Fr	
22	Sa	
23	S	
24	M	
25	Tu	
26	W	
27	Th	
28	Fr	Preliminary and Bursary Examinations may begin. Time Tables will be given in CALENDAR for 1900-1901, and in the Regulations issued separately.
29	Sa	
30	S	

Calendar for the Academic Year 1900-1901.

OCTOBER 1900.					
S		7	14	21	28
M	1	8	15	22	29
Tu	2	9	16	23	30
W	3	10	17	24	31
Th	4	11	18	25	
Fr	5	12	19	26	
Sa	6	13	20	27	

NOVEMBER 1900.					
S		4	11	18	25
M		5	12	19	26
Tu		6	13	20	27
W		7	14	21	28
Th	1	8	15	22	29
Fr	2	9	16	23	30
Sa	3	10	17	24	

DECEMBER 1900.					
S		2	9	16	23	30
M		3	10	17	24	31
Tu		4	11	18	25[1]	
W		5	12	19	26	
Th		6	13	20	27	
Fr		7	14	21	28	
Sa	1	8	15	22	29	

JANUARY 1901.					
S		6	13	20	27
M		7	14	21	28
Tu	1	8	15	22	29
W	2	9	16	23	30
Th	3	10	17	24	31
Fr	4	11	18	25	
Sa	5	12	19	26	

FEBRUARY 1901.					
S		3	10	17	24
M		4	11[2]	18	25
Tu		5	12	19	26
W		6	13	20	27
Th		7	14	21	28
Fr	1	8	15	22	
Sa	2	9	16	23	

MARCH 1901.						
S		3	10	17	24	31
M		4	11	18	25	
Tu		5	12	19	26	
W		6	13	20	27	
Th		7	14	21	28	
Fr	1	8	15	22	29	
Sa	2	9	16	23	30	

APRIL 1901.					
S		7	14	21	28
M	1	8	15[4]	22	29
Tu	2	9	16	23	30
W	3	10	17	24	
Th	4	11	18	25	
Fr	5[3]	12	19	26	
Sa	6	13	20	27	

MAY 1901.						
S		5	12	19	26	
M		6	13	20	27	
Tu		7	14	21	28	
W	1	8	15	22	29	
Th	2	9	16	23	30	
Fr	3	10	17	24	31	
Sa	4	11	18	25		

JUNE 1901.						
S		2	9	16	23	30
M		3	10	17	24	
Tu		4	11	18	25	
W		5	12	19	26	
Th		6	13	20	27	
Fr		7	14	21	28	
Sa	1	8	15	22	29	

JULY 1901.						
S		7	14	21	28	
M	1	8	15	22	29	
Tu	2	9	16	23	30	
W	3	10	17	24	31	
Th	4	11	18	25		
Fr	5	12	19	26		
Sa	6	13	20	27		

AUGUST 1901.						
S		4	11	18	25	
M		5	12	19	26	
Tu		6	13	20	27	
W		7	14	21	28	
Th	1	8	15	22	29	
Fr	2	9	16	23	30	
Sa	3	10	17	24	31	

SEPTEMBER 1901.						
S	1	8	15	22	29	
M	2	9	16[4]	23	30	
Tu	3	10	17	24	31	
W	4	11	18	25		
Th	5	12	19	26		
Fr	6	13	20	27		
Sa	7	14	21	28		

[1] Christmas.

[2] Holiday in Faculty of Arts.

[3] Good Friday.

[4] Edinburgh Holiday.

ADDRESSES OF THE PRINCIPAL, PROFESSORS, EMERITI AND RESIGNED PROFESSORS, AND UNIVERSITY LECTURERS.

I.—Principal and Professors.

Principal Sir William Muir, Dean Park House.
Professor Annandale, 34 Charlotte Square.
„ Armstrong, The University.
„ Baldwin Brown, 20 Lansdowne Crescent.
„ Bayley Balfour, Inverleith House.
„ Crum Brown, 8 Belgrave Crescent.
„ Butcher, 27 Palmerston Place.
„ Chiene, 26 Charlotte Square.
„ Chrystal, 5 Belgrave Crescent.
„ Copeland, Royal Observatory, Blackford Hill.
„ Eggeling, 15 Hatton Place, Grange.
„ Ewart, Penicuik.
„ Flint, Johnstone Lodge, Craigmillar Park.
„ Fraser, 13 Drumsheugh Gardens.
„ Geikie, Kilmorie, Colinton Road.
„ Sir Ludovic Grant, Bart., 4 Belgrave Crescent.
„ Greenfield, 7 Heriot Row.
„ Hardie, 4 Chalmers Crescent.
„ Kennedy, 9 Fountainhall Road.
„ Kirkpatrick, Southview, Murrayfield.
„ Laurie, 22 George Square.
„ Sir Henry D. Littlejohn, 24 Royal Circus.
„ Mackinnon, 26 Blacket Place.
„ Mackintosh, 2 Drummond Place.
„ Nicholson, 3 Belford Park.
„ Niecks, 22 Dick Place.
„ Patrick, 5 Polwarth Terrace.
„ Rankine, 23 Ainslie Place.
„ Saintsbury, 2 Eton Terrace.

Professor Seth, 3 Queen's Crescent.
„ Seth Pringle Pattison, 16 Church Hill.
„ Simpson, 52 Queen Street.
„ Hunter Stewart, 9 Learmonth Gardens.
„ Sir Thomas Grainger Stewart, 19 Charlotte Square.
„ Tait, 38 George Square.
„ Taylor, 6 Greenhill Park.
„ Sir Wm. Turner, 6 Eton Terrace.
„ Wallace, 5 Mansfield Place.
„ Wood, 16 Buckingham Terrace.

II.—Professors Emeriti.

Archibald Hamilton Charteris, D.D., formerly Professor of Biblical Criticism and Biblical Antiquities; Cameron House, Dalkeith Road.

Alexander Campbell Fraser, D.C.L., LL.D., formerly Professor of Logic and Metaphysics; Gorton, Hawthornden, Midlothian.

Sir Douglas Maclagan, formerly Professor of Medical Jurisprudence and Public Health; 28 Heriot Row, Edinburgh.

Norman Macpherson, LL.D., formerly Professor of Scots Law; 6 Buckingham Terrace, Edinburgh.

David Masson, LL.D., formerly Professor of Rhetoric and English Literature; Gowanlea, Juniper Green, Midlothian.

Sir Herbert Stanley Oakeley, D.C.L., LL.D., Mus. D., formerly Professor of Music; 38 Marine Parade, Dover.

Charles Piazzi Smyth, LL.D., formerly Professor of Practical Astronomy; Clova, Ripon.

III.—Professors Resigned.

Theodor Aufrecht, M.A., LL.D., Ph.D., formerly Professor of Sanskrit; The University, Bonn.

Sir Archibald Geikie, LL.D., formerly Professor of Geology; Museum of Geology, Jermyn Street, London.

Henry Goudy, LL.D., formerly Professor of Civil Law; now Professor of Civil Law, University, Oxford.

Right Hon. Lord Lister, LL.D., M.D., formerly Professor of Clinical Surgery; 12 Park Crescent, Portland Place, London, W.

Æneas James George Mackay, LL.D., Sheriff of Fife, Advocate, formerly Professor of History; 7 Albyn Place, Edinburgh.

George Walter Prothero, Editor of *The Quarterly Review*, formerly Professor of History; 24 Bedford Square, London, W.C.

Robert Wallace, D.D., M.P., formerly Professor of Church History; 50 Finborough Road, London, S.W.

IV.—University Lecturers.

Andrew P. Aitken, D.Sc., 57 Great King Street.

Colonel F. Bailey, R.E., 7 Drummond Place.

Henry Barker, M.A., 18 Bruntsfield Gardens.

J. Beard, D.Sc., Ph.D., 93 Comely Bank Avenue.

George A. Berry, M.B., C.M., 31 Drumsheugh Gardens.

A. W. Borthwick, B.Sc., Royal Botanic Gardens.

Edmond W. Carlier, M.D., 39 Morningside Drive.

Thomas S. Clouston, M.D., Tipperlinn House, Morningside Place.

John James Cook, M.A., LL.B., 42 Northumberland Street.

Andrew Davidson, M.D., 30 Morningside Drive.

Leonard Dobbin, Ph.D., 7 Cobden Road.

John Smith Flett, M.A., B.Sc., M.B., C.M., 12 Thirlestane Road.

William Fream, LL.D., B.Sc., The Vinery, Downton, Salisbury.

Robert P. Hardie, M.A., 4 Chalmers Crescent.

David Hepburn, M.D., 11 Glenorchy Terrace.

Professor William James, of Harvard University, Cambridge, Massachusetts, U.S.A. (Gifford Lecturer in Natural Theology).

William Allan Jamieson, M.D., 35 Charlotte Square.

Neil J. D. Kennedy, M.A., 14 St Vincent Street.

Walter Hume Kerr, M.A., B.Sc., Viewfield, Juniper Green.

Cargill G. Knott, M.A., D.Sc., 42 Upper Gray Street.

Peter M'Bride, M.D., C.M., 16 Chester Street.

Hugh Marshall, D.Sc., 131 Warrender Park Road.
James Mill, M.A., 12 Howard Place.
William Peddie, D.Sc., 14 Ramsay Garden.
John Playfair, M.D., 5 Melville Crescent.
Charles Sarolea, Ph.D., D.Litt., l'Ermitage, Colinton, Edinburgh.
Otto Schlapp, Ph.D., 9 Cluny Place.
William Cameron Sillar, M.B., B.Sc., 46 George Square.
G. Gregory Smith, M.A., 16 Murrayfield Avenue.
Alexander Douglas Thomson, M.A., D.Litt., 20 Thirlestane Road.
Charles Tweedie, M.A., B.Sc., 15 Dalrymple Crescent.
David Arthur Welsh, M.D., 82 Marchmont Crescent.

REQUIREMENTS OF THE UNIVERSITY.

At a recent meeting of the University Court, a report by the Committee appointed to draw up a statement and appeal for funds for University purposes, of which the following is a summary, was approved :—

The Committee had issued a statement and appeal, signed by the Right Hon. A. J. Balfour, the Right Hon. Lord Balfour of Burleigh, Chancellor and Rector respectively of the University, the Right Hon. the Lord Provost, and Principal Sir William Muir. In this statement it was pointed out that the two departments whose needs were most pressing were the library and the public health department. In the library the most urgent requirement was stated to be a catalogue, the cost of which was estimated at about £3000. In the department of public health, the necessary laboratories and other equipment would involve an outlay of at least £10,000. The appeal for the latter purpose met with a prompt and most generous response from Mr John Usher of Norton, who had already won the gratitude of the University as one of the joint founders of the Chair of Public Health. Mr Usher's promised benefaction, amounting to a sum very considerably larger than that which was originally asked, has relieved the University of all anxiety as to the proper equipment of the public health department. It seemed at one time as if the Committee would be obliged to address their appeal on behalf of the library catalogue to the general public, but, thanks to the munificence of the late Sir William Fraser, not only were funds provided for the endowment of a Professorship of History, and for other strictly defined purposes, but power was given to the Senatus to dispose, as they thought best, of certain moneys out of the residue of his estate. Of this residue the Senatus, in March 1899, voted a sum of £3000, to be expended on the preparation of a catalogue, and it is hoped that the catalogue will be completed in the course of two or three years.

But the full aims of the appeal are thereby only partially met. For the library additional funds are urgently required. The most pressing wants are these: (1) A fire-proof room in which to store the rare and valuable books of the fifteenth and early sixteenth century, together with the MSS., numbering about 7000, which are often consulted by scholars and authors from all parts. (2) A fund for the purchase of scientific and literary journals and of larger works of reference. These at present absorb 47 per cent. of the total sum available for all purchases, so that only about £670 is left for the purchase of new books. The appeal under this head (reduced to the lowest figure) was for the sum of £25,000. (3) Extensive structural alterations and new book-cases, costing at least £5000. If these improvements are not effected, the congestion arising from want of space will very soon become unmanageable. The only alternative plan, and far more desirable, would be the erection of a new and suitable building for the library by the gift of some benefactor. The establishment of the Physical Laboratory, again, cannot much longer be delayed. Its construction and equipment will, indeed, be a large undertaking, but the task is one which will soon have to be faced if the scientific reputation of the University is to be maintained. Indeed, in every department of study there is great and increasing need of money to add to the teaching power of the University, and to supply the many gaps which still exist in our educational system.

The Court continued the Committee in order to advise when, in their opinion, the moment has come for the renewal of vigorous operations.

University Officers.

Chancellor.

Date of Institution.		Appointed
1859.	RIGHT HON. ARTHUR JAMES BALFOUR, M.P., D.C.L., LL.D.	1891

Vice-Chancellor.

1859.	SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D.	1885

Rector.

1859.	THE RIGHT HON. LORD BALFOUR OF BURLEIGH, LL.D.,	1896

Principal.

1582.	SIR WILLIAM MUIR, K.C.S.I., D.C.L., LL.D., Ph.D.	1885

Representative in Parliament.

1868.	SIR WILLIAM OVEREND PRIESTLEY, K.B., M.D., LL.D.	1896

University Court.

President—THE RECTOR, *Ex officio.*

THE PRINCIPAL	*Ex officio.*		
RT. HON. MITCHELL THOMSON, Lord Provost of Edinburgh	*Ex officio.*		
ÆNEAS J. G. MACKAY, LL.D., Advocate	Assessor, nominated by Chancellor		1891
THE HON. LORD STORMONTH DARLING, LL.D.	Do.	nominated by Rector	1887
ANDREW MITCHELL, Advocate	Do.	elected by Town Council	1897
PATRICK HERON WATSON, M.D., LL.D.	Do.	elected by General Council	1887
J. HOPE FINLAY, W.S.	Do.	do. do.	1893
A. TAYLOR INNES, M.A., Advocate.	Do.	do. do.	1893
JOSEPH BELL, M.D.	Do.	do. do.	1895
SIR WILLIAM TURNER, M.B., D.C.L., LL.D., Professor of Anatomy	Do.	elected by Senatus	1889
ALEXANDER CRUM BROWN, M.D., D.Sc., Professor of Chemistry	Do.	do. do.	1889
SAMUEL HENRY BUTCHER, LL.D., Litt.D., Professor of Greek	Do.	do. do.	1891
SIMON S. LAURIE, LL.D., Professor of Education	Do.	do. do.	1898

Secretary—PROFESSOR TAYLOR, D.D.
Factor and Law Agent—HENRY COOK, W.S.
Auditor—THOMAS GOLDIE DICKSON, C.A.
Clerk—THOMAS GILBERT.
Assistant Clerk—JAMES DOWIE.
Secretary's Clerk—GEORGE CAMPBELL.

Curators of Patronage.

		Appointed.
PRINCIPAL SIR WILLIAM MUIR	Elected by University Court	1887
Right Hon. J. P. B. ROBERTSON, LL.D., Lord Justice General	Elected by do.	1896
PATRICK HERON WATSON, M.D., LL.D.	Elected by do.	1891
MITCHELL THOMSON, Lord Provost	Elected by Town Council	1898
Lt.-Col. ALLN. FORBES MACKAY	Elected by do.	1898
Sir JAS. ALEXANDER RUSSELL, LL.D.	Elected by do.	1891
GEO. AULDJO JAMIESON, C.A.	Elected by do.	1892

Secretary—R. HERBERT JOHNSTON, W.S., 66 Frederick Street.

Senatus Academicus.

President—THE PRINCIPAL.

Secretary—Professor Sir LUDOVIC GRANT, Bart., B.A.

FACULTY OF ARTS.

Dean—Professor CHRYSTAL, LL.D.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1760	**Rhetoric and English Literature**	GEO. SAINTSBURY, M.A., LL.D.	1895	Crown.
1583	**Humanity**	WILLIAM ROSS HARDIE, M.A.	1895	Lds. of Ses., Cur., Fac. of Adv., and W.S. Soc.[1]
1583	**Greek**	SAMUEL HENRY BUTCHER, LL.D., Litt.D.	1882	Curators.
1641	**Hebrew and Semitic Languages**	ARCH. ROBT. STIRLING KENNEDY, B.D., D.D.	1895	Curators.
1862	**Sanskrit and Comparative Philology**[2]	JULIUS EGGELING, Ph.D.	1875	Crown.
1882	**Celtic Languages, Literature, History, and Antiquities**[3]	DON. MACKINNON, M.A.	1882	Curators.
1583	**Mathematics**	GEO. CHRYSTAL, LL.D.	1879	Curators.
1583	**Natural Philosophy**	PETER GUTHRIE TAIT, M.A., D.Sc.	1860	Curators.
1583	**Logic & Metaphysics**	ANDREW SETH PRINGLE PATTISON, M.A., LL.D.	1891	Curators.
1583	**Moral Philosophy**	JAMES SETH, M.A.	1898	Curators.
1719	**History**	JOHN KIRKPATRICK, LL.B., LL.D.	1881	Fac. of Adv., & Cur.
1893	**History**	[5]	1899	University Court.
1871	**Commercial & Political Economy & Mercantile Law**[4]	JOSEPH SHIELD NICHOLSON, M.A., D.Sc.	1880	Cur., & Merch. Co.

[1] The Judges of the Court of Session nominate two Delegates, the Curators two, the Faculty of Advocates one, and the Society of Writers to the Signet one. These Delegates appoint the Professor, who receives his Commission from the Curators.

[2] This Chair was originally endowed by John Muir, LL.D. (Edin.), D.C.L. (Oxon.), of the Bengal Civil Service, and by a Parliamentary vote.

[3] Originally endowed with a sum of £14,000, raised by public subscription.

[4] This Chair was endowed in 1871 by the Merchant Company of Edinburgh, and other Governors of George Watson's and Daniel Stewart's Hospitals.

[5] Vacant at date of going to Press.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1879	**Fine Art**[1] (Watson Gordon Chair).....	GERARD BALDWIN BROWN, M.A.	1880	Univ. Ct., Pres. R. Scott. Acad.
1876	**Theory, History, and Practice of Education**[2]	SIMON SOMERVILLE LAURIE, LL.D.	1876	Bell Trustees.

FACULTY OF SCIENCE.

Dean—Professor GEIKIE, D.C.L., LL.D.

1583	**Mathematics**	GEORGE CHRYSTAL, M.A., LL.D.	1879	Curators.
1838	**Natural Philosophy**..	PETER GUTHRIE TAIT, M.A., D.Sc.	1860	Curators.
1786	**Astronomy**.....	RALPH COPELAND, Ph.D.	1889	Crown.
1713	**Chemistry**	ALEX. CRUM BROWN, M.D., D.Sc.	1869	Curators.
1767	**Natural History**.....	JAMES COSSAR EWART, M.D.	1882	Curators.
1676	**Botany**.....	ISAAC BAYLEY BALFOUR, M.D., D.Sc.	1888	Crown.
1705	**Anatomy**.....	Sir WILLIAM TURNER, M.B., D.C.L., LL.D.	1867	Curators.
1685	**Physiology**.....	[7]	1899	Curators.
1871	**Geology**[3].....	JAMES GEIKIE, D.C.L., LL.D.	1882	Crown.
1868	**Engineering**[4].....	GEO. FREDERICK ARMSTRONG, M.A., C.E.	1885	Crown.
1790	**Agriculture & Rural Economy**[5]	ROBERT WALLACE.....	1885	Lds.of Sess., Cur. & Univ. Ct.
1898	**Public Health**[6].....	CHAS. HUNTER STEWART, M.B., C.M., D.Sc.	1898	Univ. Court.

FACULTY OF DIVINITY.

Dean—Professor TAYLOR, D.D.

1583	**Divinity**.....	ROBERT FLINT, D.D.....	1876	Curators.
1846	**Biblical Criticism & Biblical Antiquities**	JOHN PATRICK, D.D.....	1898	Crown.
1694	**Ecclesiastical History**	MALCOLM CAMPBELL TAYLOR, D.D.	1877	Crown.
1642	**Hebrew and Semitic Languages**	ARCHD. ROBT. STIRLING KENNEDY, B.D., D.D.	1875	Curators.

FACULTY OF LAW.

Dean—Professor Sir LUDOVIC GRANT, Bart., B.A.

1707	**Public Law**.....	Sir LUDOVIC GRANT, Bart., B.A.	1890	Crown.

[1] This Chair was endowed by Mr H. G. and Miss Frances Watson.

[2] This Chair was originally endowed by the Trustees of the late Dr A. Bell, with a sum of £6000, to which a further sum of £4500 out of the Bell Fund was added by the Educational Endowments Commission in 1887.

[3] This Chair was originally endowed in 1871 by a sum of £6000 mortified by Sir Roderick Impey Murchison, Bart., and by an annual vote by Parliament.

[4] This Chair was endowed in 1868 by Sir David Baxter, and by an annual vote of Parliament.

[5] The Professor is elected by nine Delegates, three chosen by the Judges of the Court of Session, three by the Curators, and three by the University Court.

[6] This Chair, "The Bruce and John Usher Chair of Public Health," was endowed by legacy of £5000 from the late Alexander Low Bruce, Esq.; donations of £1105 from Mrs A. L. Bruce and other members of the Bruce family; £3000 from John Usher, Esq. of Norton; and £1000 from Messrs William Younger & Co.

[7] Vacant at date of going to Press.

Date of Institution.	Chairs.	Professors.	Appointed.	Patrons.
1710	**Civil Law**	Jas. Mackintosh, B.A.	1873	Fac. of Adv., and Cur.[1]
1719	**History (Constitutional, etc.)**	John Kirkpatrick, LL.B., LL.D.	1881	Do.[1]
1722	**Scots Law**	John Rankine, LL.D.	1888	Do.[1]
1807	**Forensic Medicine**	Sir Henry Duncan Littlejohn, M.D., LL.D.	1897	Crown.
1825	**Conveyancing**[2]	John Philp Wood, W.S.	1891	Cur., Dep.-Kpr. and W.S. Soc.[3]
1871	**Commercial and Political Economy and Mercantile Law**	Joseph Shield Nicholson, M.A., D.Sc.	1880	Cur., & Merch. Co.

FACULTY OF MEDICINE.

Dean—Professor Fraser, M.D., LL.D., F.R.S.,

1713	**Chemistry**	Alex. Crum Brown, M.D.	1869	Curators.
1767	**Natural History**	James Cossar Ewart, M.D.	1882	Crown.
1676	**Botany**	Bayley Balfour, M.D.	1888	Curators.
1705	**Anatomy**	Sir Wm. Turner, M.B.	1867	Curators.
1685	**Physiology**	[5]	1899	Curators.
1831	**Pathology**	William Smith Greenfield, M.D.	1881	Curators.
1768	**Materia Medica**	Thomas Richard Fraser, M.D.	1877	Curators.
1685	**Medicine**	Sir Thomas Grainger Stewart, M.D.	1876	Curators.
1831	**Surgery**	John Chiene, M.D.	1882	Curators.
1726	**Midwifery**	Alex. Russell Simpson, M.D.	1870	Curators.
1807	**Forensic Medicine**	Sir Henry Duncan Littlejohn, M.D.	1897	Crown.
1803	**Clinical Surgery**	Thos. Annandale, M.D.	1877	Crown.
1741	**Clinical Medicine**	Sir Thomas Grainger Stewart, M.D.; Thomas Richard Fraser, M.D.; William Smith Greenfield, M.D.; Diseases of Women—Alexander Russell Simpson, M.D.		
1898	**Public Health**[4]	Charles Hunter Stewart, M.B., CM., D.Sc.	1898	Univ. Court.

FACULTY OF MUSIC.

Dean—Professor Niecks, Mus. D., The Principal, *ex officio*.

Professor Kirkpatrick, appointed by the Senatus.

1839	**Reid Chair of Music**	Fred. Niecks, Mus. D.	1891	University Court.

UNIVERSITY LECTURERS.

	Subjects.	Lecturers.		
1892	**Rhet. and English Lit.**	G. Gregory Smith, M.A.	1892	University Court.
1892	**Latin**	James Mill, M.A.	1896	Do.

[1] For each of these Chairs the Faculty of Advocates send to the Curators a leet of two, of whom the Curators must choose one.

[2] Endowed by the Society of Writers to the Signet.

[3] The Election is by—(1) Two Delegates from the Curators; (2) Two from the Society of Writers to the Signet; and (3) The Deputy-Keeper of the Signet.

[4] See footnote 6, page 3.

[5] Vacant at date of going to Press.

Date of Institution.	Subjects.	Lecturers.	Appointed.	Patrons.
1892	Greek	A. Douglas Thomson, M.A., D.Litt.	1892	University Court.
1892	Mathematics	Charles Tweedie, M.A., B.Sc.	1892	Do.
1892	Natural Philosophy	William Peddie, D.Sc.	1892	Do.
1892	Applied Mathematics	Cargill G. Knott, M.A., D.Sc.	1892	Do.
1892	Logic & Metaphysics	Robert P. Hardie, M.A.	1892	Do.
1892	Moral Philosophy	Henry Barker, M.A.	1898	Do.
1894	French Lang., Lit., and Romance Philology	Charles Sarolea, Ph.D., D.Litt.	1894	Do.
1894	German Lang., Lit., and Teutonic Philology	Otto Schlapp, Ph.D.	1894	Do.
1894	Chemical Theory	Leonard Dobbin, Ph.D.	1894	Do.
1894	Plant Physiology	A. W. Borthwick, B.Sc.	1898	Do.
1894	Mineralogy and Crystallography	Hugh Marshall, D.Sc.	1894	Do.
1894	Petrology	John Smith Flett, M.A., B.Sc., M.B., C.M.	1894	Do.
1894	Advanced Physiology	L. W. Carlier, M.D., B.Sc.	1894	Do.
1894	Physiological Chemistry	T. H. Milroy, M.D.	1899	Do.
1895	Geometrical and Mechanical Drawing	Walter Hume Kerr, M.A., B.Sc.	1895	Do.
1894	Agricultural Chemistry	A. P. Aitken, D.Sc.	1894	Do.
1889	Forestry	Colonel F. Bailey, R.E.	1892	Do.
1890	Agricultural Entomology	William Fream, LL.D., B.Sc.	1891	Do.
1887	Gifford Lecturer on Natural Theology	Professor William James of Harvard University	1898	Do.
1889	Gunning Lecturer	Rev. John M. Robertson, M.A., St Ninians	1899	Do.
1894	International Private Law	N. J. D. Kennedy, M.A.	1899	Do.
1894	Procedure & Evidence	John James Cook, M.A., LL.B.	1895	Do.
1879	Mental Diseases	Thos. S. Clouston, M.D.	1879	Do.
1883	Diseases of the Eye	George A. Berry, M.B., C.M.	1896	Do
1885	Clinical Instruction on Diseases of Children	John Playfair, M.D.	1889	Do.
1885	Embryology and Vertebrate Zoology	John Beard, D.Sc.	1894	Do.
1894	Regional Anatomy	David Hepburn, M.D.	1896	Do.
1894	Experimental Pharmacology	William C. Sillar, M.B., B.Sc.	1894	Do.
1894	Pathological Bacteriology	D. A. Welsh, M.D.	1898	Do.
1897	Diseases of the Larynx, Ear, and Nose	Peter M'Bride, M.D.	1897	Do.
1898	Diseases of Tropical Climates	Andw. Davidson, M.D.	1899	Do.
1899	Clinical Instruction on Diseases of the Skin	W. Allan Jamieson, M.D.	1899	Do.

UNIVERSITY ASSISTANTS.

IN THE FACULTY OF ARTS.

Subjects.	Assistants.
Rhetoric and Eng. Liter.	G. Gregory Smith, M.A.
Humanity	James Mill, M.A.
Greek	A. Douglas Thomson, M.A., D.Litt.
Hebrew and Semitic Languages	Andrew Tweedie, M.A., B.D.
Mathematics	Charles Tweedie, M.A., B.Sc.
Natural Philosophy	William Peddie, D.Sc.
Do. (Mechanical)	Thomas Lindsay.
Do. under Nichol Foundation	Alex. Shand.
Logic and Metaphysics	R. P. Hardie, M.A.
Moral Philosophy	Henry Barker, M.A.
History	D. P. Heatley.
Political Economy, &c.	Archibald B. Clark, M.A.

IN THE FACULTY OF SCIENCE.

Geology	John S. Flett, M.A., B.Sc., M.B., C.M.
Engineering	W. H. Kerr, M.A., B.Sc.
Do., Demonstrator	W. G. Rennie, B.Sc.

IN THE FACULTY OF DIVINITY.

Divinity	Rev. Alexander Horn, B.D.
Hebrew and Semitic Languages	Andrew Tweedie, M.A., B.D.

IN THE FACULTY OF LAW.

Civil Law	J. M. Irvine, M.A., B.Sc., LL.B.
Scots Law	W. M. Gloag, B.A.
Conveyancing	Peter Manson.

IN THE FACULTY OF MEDICINE.

Chemistry	Leonard Dobbin, Ph.D.; Hugh Marshall D.Sc.; William White Taylor, M.A., B.Sc.; J. P. Longstaff; John W. Eastham, B.Sc.
Zoology	J. Beard, D.Sc.; Gregg Wilson, M.A., D.Sc.
Botany	J. H. Burrage, M.A., and A. W. Borthwick, B.Sc.
Anatomy	David Hepburn, M.D.; E. H. Fraser, M.B.; David Waterston, M.B., C.M.; and B. C. R. Aldren, M.B., C.M.
Physiology	E. W. Carlier, M.D., B.Sc.; T. H. Milroy, M.D., and [1]
Pathology	D. A. Welsh, M.D.; J. M. Beattie, M.B. *Laboratory Assistant*—Richard Muir.
Materia Medica	Wm. C. Sillar, M.B., C.M., B.Sc., and D. B. Waters, M.B., Ch.B.
Medicine	J. Gibson Cattanach, M.B., C.M.
Clinical Medicine Tutors	Harry Rainy, M.D.; George Elder, M.D.; J. G. Cattanach, M.B., C.M.; and W. Fordyce, M.A., M.D. (for Diseases of Women).
Surgery	Harold J. Stiles, M.B., C.M.; John Stevenson, M.B., C.M.
Midwifery	William Fordyce, M.D.
Forensic Medicine	T. W. Drinkwater, Ph.D.
Public Health	J. Buchanan Young, M.B., D.Sc.
Clinical Surgery Tutor	John Wheeler Dowden, M.B., C.M.

[1] Vacant at date of going to Press.

EXAMINERS.

For Preliminary Examination.

The Professors of or Lecturers on the several subjects, and the following additional Examiners:—

Subjects.	Examiners.	Appointed.	Patrons.
English	Oliver Elton, B.A.	1898	University Court.
Latin, Greek	F. R. Jamieson, M.A.	1898	Do.
Mathematics	James Goodwillie, M.A., B.Sc.	1898	Do.
French, German, Italian	C. D. Campbell.	1897	Do.
Dynamics	James Goodwillie, M.A., B.Sc.	1898	Do.

FOR DEGREES, &c.

I.—IN THE FACULTY OF ARTS.

The Professors of or Lecturers on the several Subjects, and the following additional Examiners:—

1. LANGUAGE AND LITERATURE.

Subjects.	Examiners.	Appointed.	Patrons.
Latin, Greek	F. R. Jamieson, M.A. and Prof. E. A. Sonnenschein	1898	University Ct.
English	Oliver Elton, B.A.	1898	Do.
French, German	C. D. Campbell	1897	Do.
Sanskrit	Arthur A. Macdonell, M.A.	1896	Do.
Hebrew and Semitic Languages	W. B. Stevenson, M.A., B.D.	1899	Do.
Classical Archæology	Professor Ernest Gardner.	1897	Do.
Celtic	Don. Masson, M.A., M.D.	1896	Do.

2. MENTAL PHILOSOPHY.

Logic and Metaphysics, Moral Philosophy	Chas. M. Douglas, M.A., D.Sc.	1899	Do.
Political Economy	John Row-Fogo	1897	Do.
Education	W. L. Carrie, M.A.	1896	Do.
Philosophy of Law	J. S. Taylor Cameron, LL.B.	1899	Do.

3. SCIENCE.

Mathematics, Natural Philosophy	James Goodwillie, M.A., B.Sc.	1898	Do.
Astronomy	W. E. Plummer, M.A.	1895	Do.
Chemistry	W. H. Perkin, Ph.D.	1896	Do.
Zoology	J. R. Ainsworth Davies, M.A.	1899	Do.
Botany	Robert Turnbull, B.Sc.	1897	Do.
Geology	John Horne	1895	Do.

4. HISTORY AND LAW.

History	John Downie, M.A.	1895	Do.
Archæology and Art (History of)	Walter Armstrong, B.A. (Oxon.).	1897	Do.
Constitutional Law and History, Roman Law, Public Law	J. S. Taylor Cameron, LL.B.	1899	Do.

II.—SCIENCE.

1. PURE SCIENCE.

The Professors of and Lecturers on the several subjects, and the additional Examiners in Mathematics, Natural Philosophy, Zoology, Botany, Chemistry, Astronomy, Anatomy, Physiology, and Geology.

2. ENGINEERING.

The Professors of and Lecturers on the several subjects, the additional Examiners in Mathematics, Natural Philosophy, and Chemistry, and in

Subjects.	Examiners.	Appointed.	Patrons.
Engineering	DAVID M. WESTLAND, C.E.	1897	University Court.

3. PUBLIC HEALTH.

The Professors of and Lecturers on the several subjects, and the following additional Examiners:—

Subjects.	Examiners.	Appointed.	Patrons.
Physics	JAMES GOODWILLIE, M.A., B.Sc.	1898	University Court.
Laboratory Work	JOHN ROBERTSON, M.D., B.Sc.	1897	Do.
Medicine in its bearings on Public Health	JOHN WYLLIE, M.D.	1898	Do.
Sanitation, Sanitary Law, and Vital Statistics	R. BRUCE LOW, M.D.	1897	Do.

4. AGRICULTURE.

The Professors of and Lecturers on the several subjects, and the following additional Examiners:—

The additional Examiners in Mathematics, Chemistry, Botany, Natural History, Geology, and Political Economy, and in

Subjects.	Examiners.	Appointed.	Patrons.
Agriculture	T. H. MIDDLETON, B.Sc.	1896	University Court.
Veterinary Hygiene	R. RUTHERFORD, F.R.C.V.S.	1898	Do.
Chemistry as applied to Agriculture	JOHN A. MURRAY, B.Sc.	1896	Do.
Political Economy	JOHN ROW-FOGO	1897	Do.
Forestry	WM. SOMERVILLE, B.Sc., D.Œcon.	1896	Do.
Agricultural Entomology	R. STEWART MACDOUGALL, M.A., D.Sc.	1899	Do.

III.—IN THE FACULTY OF DIVINITY.

The Professors in the Faculty of Divinity, and the following additional Examiners:—

ALEXANDER S. MARTIN, M.A., B.D.		1899	University Court.
WILLIAM B. STEVENSON, M.A., B.D.		1899	Do.

IV.—IN THE FACULTY OF LAW.

The Professors of and Lecturers on, the several subjects, and the following additional Examiners:—

Subjects.	Examiners.	Appointed.	Patrons.
Scots Law, International Private Law, Conveyancing, and Forensic Medicine	JAMES A. HOPE, LL.B.	1899	University Court.
Roman, Public, International, and Constitutional Law, and General Jurisprudence	J. S. TAYLOR CAMERON, LL.B.	1899	Do.
Political Economy	JOHN ROW-FOGO	1897	Do.

V.—IN THE FACULTY OF MEDICINE.

The Professors in the Faculty of Medicine, and the following additional Examiners:—

Botany	ROBERT TURNBULL, B.Sc.	1897	University Court.
Zoology	J. R. AINSWORTH DAVIES, M.A.	1899	Do.

Subjects.	Examiners.	Appointed.	Patrons.
Physics	Jas. Goodwillie, M.A., B.Sc.	1898	University Court.
Chemistry	W. H. Perkin, Ph.D.	1896	Do.
Anatomy	Johnson Symington, M.D.	1896	Do.
Physiology	De Burgh Birch, M.D.	1897	Do.
Materia Medica	C. D. F. Phillips, M.D.	1896	Do.
Pathology	G. Sims Woodhead, M.D.	1896	Do.
Forensic Medicine and Public Health	R. Bruce Low, M.D.	1897	Do.
Surgery	J. Crawford Renton, M.D.	1896	Do.
Clinical Surgery	Alex. Gordon Miller, M.D.	1898	Do.
	J. M. Cotterill, M.B., C.M.	1896	Do.
	Frederick Page, M.D.	1896	Do.
Medicine	George A. Gibson, M.D.	1897	Do.
Clinical Medicine	J. O. Affleck, M.D.	1896	Do.
Midwifery	James H. Ferguson, M.D.	1897	Do.

VI.—IN THE FACULTY OF MUSIC.

The Professor of Music and Sir Alexander C. Mackenzie, Mus. D.

FOR SCHOOLMASTER'S DIPLOMA.

The Professor of Education and W. L. Carrie, M.A. 1897.

FOR TITLE OF LITERATE IN ARTS.

The Professors of and Lecturers on the several subjects, and the Examiners for Degrees in Arts.

—o—

University Librarian.—Hugh Alexander Webster.

Assistant Librarians.—Alexander Anderson; David Cuthbertson; Chas Martin; William Wright; George Tait; Edmond Muriset; James H. S. Gregory, *at University New Buildings.*

—o—

Organist.—Thomas H. Collinson, Mus. B.

—o—

KEEPERS OF MUSEUMS.

Anatomical Museum — Professor Sir Wm. Turner.
Do. Assistant Keeper — James Simpson.
Museum of Natural History — Professor Ewart.

—o—

Clerk of Senatus — Thomas Gilbert.
Assistant Clerks — James Dowie, John Stirton, Thomas F. Harley.
Clerk of Works — Allan E. L. Clark.
Janitor and Mace-Bearer — James Tweeddale.
Warders — James Donaldson, William Murray.
Caretaker, M'Ewan Hall — Bryce Struthers.

—o—

GENERAL COUNCIL.

President — The Right Hon. Arthur James Balfour, M.P., D.C.L., &c., Chancellor of the University.
Vice-Presidents — The Rector, The Principal, The Chancellor's Assessor, The Rector's Assessor.
Representative in Parliament — Sir William Overend Priestley, K.B., M.D., LL.D.
Convener of Business Committee — J. Camfield Lorimer, LL.B., Advocate.
Convener of Finance Committee — David D. Buchan, LL.B., S.S.C.
Secretary and Registrar — Thomas Gilbert.

Constitution of the University.

THE University of Edinburgh was originally the "College of Edinburgh" or "The Town's College," founded in 1583 by the Town Council of Edinburgh, under general powers granted by the Charter of King James VI., dated 14th April 1582. No Charter of foundation is extant; but from the first the College possessed the privilege of conferring degrees. This privilege was ratified by the "Act of Confirmation," passed in 1621, which secured to the "College of James VI." (as it had come to be called) all the rights, immunities, and privileges enjoyed by the Universities of Scotland. This ratification was renewed in the Treaty of Union between England and Scotland, and in the Act of Security. Gradually, in Acts of General Assembly, of Town Council, and of Parliament, the "College of James VI." came to be styled "The University of Edinburgh"; but it remained under the control and patronage of the Town Council down to 1858, when, by the Universities Act, all the Universities of Scotland received new and autonomous constitutions.

The University is a Corporation consisting of the Chancellor, Rector, Principal, Professors, Registered Graduates and Alumni, and Matriculated Students; and from 1858 to 1890 its government was vested in the Senatus Academicus (consisting of the Principal and the Professors), subject to the review and control of the University Court.

By the Universities (Scotland) Act 1889, the University Court was constituted a body corporate, to which the whole property belonging to the University at the passing of the Act was transferred, with full power of administration.

The Senatus, as heretofore, regulates the teaching and discipline of the University, subject to the provisions of the Universities Acts of 1858 and 1889.

CHANCELLOR.

The Chancellor is elected by the General Council for life. Changes in the ordinances and in University arrangements, proposed or approved by the University Court, must receive his

sanction. Degrees are conferred by him, or by the Vice-Chancellor. The Chancellor is President of the General Council, and nominates an Assessor in the University Court. Appointments:—

Right Hon. Lord Brougham, 1859.
Right Hon. John Inglis, D.C.L., LL.D., 1868.
Right Hon. ARTHUR J. BALFOUR, M.P., D.C.L., LL.D., &c., 1891.

VICE-CHANCELLOR.

The Vice-Chancellor, nominated by the Chancellor, may, in absence of the Chancellor, confer Degrees, but cannot discharge any other of the Chancellor's duties. In the Vice-Chancellor's absence Degrees are conferred by the Principal, or by the senior member of Senatus.

The Vice-Chancellor acts as Returning Officer at Parliamentary Elections. If there be no Vice-Chancellor at the time, the University Court appoints one to act as Returning Officer. Appointments:—

Sir D. Brewster, appointed 1860.
Sir Alexander Grant, Bart., 1868.
Sir WILLIAM MUIR, K.C.S.I., D.C.L., &c., 1885.

RECTOR.

The Rector is elected by the Matriculated Students in the University on such day in October or November as may be fixed by the University Court after consultation with the Senatus, but not later than the second Saturday in November. The term of office is three years. The next election will take place on Saturday 4th November 1899. The Rector is President of, and nominates an Assessor in, the University Court. He may, before he appoints his Assessor, confer with the Students' Representative Council. No Principal or Professor of any Scottish University is eligible. Appointments:—

Rt. Hon. W. E. Gladstone, 1859.
Thomas Carlyle, 1865.
Rt. Hon. Lord Moncreiff, 1868.
Sir W. Stirling Maxwell, Bt., 1871.
Rt. Hon. Earl of Derby, 1874.
Most Hon. Marquess of Hartington, M.P., 1877.
Rt. Hon. Earl of Rosebery, 1880.
Rt. Hon. Earl of Iddesleigh, 1883.
Most Hon. Marquess of Lothian, 1887.
Rt. Hon. George J. Goschen, M.P., LL.D., 1890.
Rt. Hon. J. P. B. Robertson, LL.D., 1893.
Rt. Hon. Lord BALFOUR OF BURLEIGH, LL.D., 1896.

REPRESENTATIVE IN PARLIAMENT.

Under Clauses 27 to 41 of the "Representation of the People (Scotland) Act," 31 & 32 Vict., cap. 48, the General Councils of the Universities of Edinburgh and St Andrews elect a Member of Parliament for these Universities.

When a poll is demanded, the votes are given by voting papers issued by the Registrar.

The appointments have been—

Sir Lyon, afterwards Lord, Playfair, K.C.B., LL.D., 1868.
Rt. Hon. J. H. A. Macdonald, C.B., Q.C., LL.D., 1885, 1886.
M. T. Stormonth Darling, Q.C., 1888.
Rt. Hon. Sir Charles J. Pearson, Q.C., LL.D., 1890, 1892.
Sir WILLIAM OVEREND PRIESTLEY, K.B., M.D., LL.D., 1896.

The Parliamentary constituency for 1899 is as follows :—

Edinburgh	8509
St Andrews	1476
Total in 1899	9985

UNIVERSITY COURT.

Under the Universities Act 1858, the Court has power :

1. To review all decisions of the Senatus, and to be a Court of Appeal from the Senatus, except as otherwise provided in the Universities Act.

2. To effect improvements in the internal arrangements of the University, after due communication with the Senatus, and with the sanction of the Chancellor; provided all such proposed improvements be submitted to the General Council for consideration.

3. To require due attention on the part of the Professors to the Regulations as to the mode of teaching and other duties imposed on the Professors.

4. To fix and regulate, from time to time, the Fees in the several Classes.

5. Upon sufficient cause shewn, and after due investigation, to censure any member of the Senatus, or to suspend him from office, and from the emoluments thereof, in whole or in part, for any period not exceeding one year, or to require him to retire on a retiring allowance, or to deprive him of office; and during the suspension of any Professor, to make provision for the teaching of his class: provided no such sentence of censure, suspension, deprivation, etc., shall have effect until approved by Her Majesty in Council.

By Sec. xix. any of the Rules and Ordinances enacted by the Universities Commissioners under the Act, may be altered or revoked by the University Court of the University to which they are applicable, but only with the written consent of the Chancellor, and with the approval of Her Majesty in Council.

By the Universities (Scotland) Act 1889, the University Court is a body corporate with perpetual succession and a common seal; and all the property belonging to the University at the passing of the Act is now vested in that body.

By the same Act, the University Court, besides the powers conferred upon it by the Act of 1858, has power—

(1.) To administer and manage the whole revenue and property of the University, including funds mortified for bursaries and other purposes, and have all the powers necessary for the purpose.

(2.) To review any decision of the Senatus appealed against by a member of Senatus, or other member of the University having an interest, and to take into consideration all representations and reports made to it by the Senatus and by the General Council.

(3.) To review, on representation made by any of its members, or by any member of Senatus, any decision which the Senatus may come to under section seven, sub-section one, but the University Court shall not review any decision of the Senatus in a matter of discipline, except upon appeal taken either by a member of Senatus or by a member of the University directly affected.

(4.) To appoint professors whose chairs are in the patronage of the University; to appoint examiners and lecturers; and to grant recognition to the teaching of any college or individual teacher for the purposes of graduation.

(5.) To define, on application by any member of Senatus, the nature and limits of a professor's duties under his commission.

(6.) To take proceedings against a principal or professor, University lecturer, assistant, recognised teacher or examiner, or other person employed in teaching or examining, without the necessity of any one not a member of the Court appearing as prosecutor, and in such proceedings to call any member of the University to give evidence, and to require the production of documents, and to institute any inquiries it may deem necessary.

(7.) To appoint from among members of the University or others, not being members of the Senatus, one third of the members of any committee charged, by ordinance of the Commissioners, with the superintendence of any libraries or museums belonging to the University; and on representation made by any of its members, or by any member of Senatus, to review any decision which the Senatus, in the exercise of its powers, may come to in respect of the recommendations of such committee.

(8.) To appoint committees of its own number, of not less than five members, with powers to report on any business entrusted to them by the University Court, or to carry out special instructions ordered by the Court.

(9.) To elect the representative of the University on the General Medical Council, under the Medical Act 1886.

(10.) After the expiration of the powers of the Commission to found new professorships, with the approval of the Universities Committee.

The University Court, by Section 21, has power to make

new ordinances, with the approval of Her Majesty in Council:

(1.) With respect to the appropriation of the sum allotted to the University by the Commissioners out of the annual grant.

(2.) Altering or revoking ordinances framed under the Universities Act 1858, or this Act; and making new ordinances: provided that such ordinances, before being submitted to Her Majesty for approval, have been communicated by the University Court to the Senatus, to the General Council, and to the University Courts of the other Universities.

Meetings of the Court are held for ordinary business on the first Monday after the 11th of each month, except August and September, and on the first Monday after 19th January, if necessary, for hearing Registration Appeals. Other meetings may be called as the Court may direct. Special Meetings may be called by order of the Rector or the Principal, or by the Secretary on a requisition specifying the object, signed by at least three members of the Court.

The University Court holds the patronage of the Chair of Music; of the new Chair of History; of the Chair of Public Health; of the Chair of Fine Art, in conjunction with the President of the Royal Scottish Academy; and a share in the patronage of the Chair of Agriculture. It also elects three of the seven Curators of Patronage, and appoints the Lecturers and the Additional Examiners for Degrees.

The Court consists of—1. The Rector; 2. The Principal; 3. The Lord Provost of Edinburgh for the time being; 4. An Assessor nominated by the Chancellor; 5. An Assessor nominated by the Rector; 6. An Assessor nominated by the Lord Provost, Magistrates, and Town Council of Edinburgh; 7. Four Assessors elected by the General Council; 8. Four Assessors elected by the Senatus Academicus; 9. Representatives of affiliated Colleges, under section 15 (4) of the Act of 1889 (if any).

Seven members constitute a quorum. The Rector and his Assessor continue in office for three years; but when the Chancellor or the Rector ceases to hold office, his Assessor continues to be a member of the Court until an Assessor is nominated by the new Chancellor or Rector. The other Assessors hold office

for four years; and all Assessors are eligible for re-election. No Principal or Professor of any Scottish University is eligible as Assessor to any other person or body than the Senatus. The Rector, and in his absence the Principal, presides at meetings of the Court, and in the absence of both a chairman is elected by the meeting. The person presiding at any meeting of the Court has a deliberative vote, and also a casting vote in case of equality.

An abstract of the proceedings of the Court 1898-99 is given in a subsequent part of the Calendar.

The names of the present Assessors are given on page 1. The names of the Assessors before 1888 will be found in the Historical Appendix to List of University Graduates, published in 1889 (page 105). The Assessors since 1888 will be found in the various Calendars.

UNIVERSITIES COMMITTEE OF PRIVY COUNCIL.

The Scottish Universities Committee of the Privy Council consists of the Lord President of the Privy Council, the Secretary for Scotland; the Lord Justice-General, Lord Justice-Clerk, Lord Advocate, and the Chancellor and the Lord Rector of each of the Universities, if members of the Privy Council; one member at least of the Judicial Committee of the Privy Council; and such other member or members of the Privy Council as Her Majesty may appoint.

The powers and duties of this Committee may, subject to rules or regulations passed by Her Majesty in Council, be exercised and discharged by any three or more of the members, one of whom shall be a member of the Judicial Committee of the Privy Council or a Senator of the College of Justice in Scotland.

CURATORS OF PATRONAGE.

By the Universities Act of 1858, the patronage of seventeen Chairs, previously in the gift of the Town Council, was transferred to seven Curators three nominated by the University Court, and four by the Town Council. The Curators also have a share in the

patronage of the Chairs of Humanity, Agriculture, Civil Law, History (and Constitutional Law), Scots Law, and Conveyancing, formerly in the gift of the Town Council, and of the Chairs of Celtic and of Political Economy, instituted after the passing of the 1858 Act. The Curators hold office for three years. The names of the present Curators are given on page 2.

REPRESENTATIVE IN GENERAL MEDICAL COUNCIL.

Under the Medical Act of 1886, the University is entitled to elect a Member of the General Medical Council, who holds office for five years. Professor Sir William Turner was elected by the Senatus in December 1886. Under the Universities Act of 1889, the University Representative is now elected by the University Court, by whom Professor Sir William Turner, M.B., D.C.L., LL.D., was elected in 1891, and re-elected in 1896.

PRINCIPAL.

The Principal, formerly elected by the Town Council, now by the Curators, holds office for life. He is the President of the Senatus Academicus; in absence of the Rector, he presides at the meetings of the University Court; and in absence of the Chancellor and Rector he presides at the Statutory Meetings of the General Council, and also at the Special Meetings, except for the election of Assessors.

Principals Elected since 1586.

1586. Robert Rollock, *previously Regent*
1599. Henry Charteris
1620. Patrick Sands
1622. Robert Boyd
1623. John Adamson
1653. Robert Leighton
1662. William Colvill
1675. Andrew Cant
1685. Alexander Monro
1690. Gilbert Rule
1703. William Carstares
1716. William Wishart
1730. William Hamilton
1732. James Smith
1736. William Wishart, *secundus*
1754. John Gowdie
1762. William Robertson
1793. George Husband Baird
1840. John Lee
1859. Sir David Brewster
1868. Sir Alexander Grant, Bart.
1885. Sir Wm. Muir, K.C.S.I.

SENATUS ACADEMICUS.

The Principal and the Professors constitute the Senatus. This body superintends and regulates the teaching and discipline of the University. The Senatus elects four Assessors in the University Court who hold office for four years. Two retire biennially, but may be re-elected; and in case of a casual vacancy, the person elected to fill it goes out of office when the person whom he succeeded would in the ordinary rotation have retired. The Senatus appoints two-thirds of the members of the Library and the Museums Committees, receives their reports, and, subject to the review of the University Court, confirms, modifies, or rejects such reports. It also elects a representative in the General Assembly of the Church of Scotland; two Managers of the Royal Infirmary; two Governors of George Heriot's Trust; two Governors of Morrison's Academy, Crieff; two Governors of the Spence Bursary Trust; one Governor of Dollar Institution; and one Governor of Stiell's Hospital, Tranent. Degrees in Arts, Science, Divinity, Law, Medicine, and Music are conferred, on the recommendation of the Senatus, by either the Chancellor, the Vice-Chancellor, the Principal, or the senior Professor present. The Principal is President of the Senatus, with a deliberative and also a casting vote; and, in his absence, the Senior Professor present acts as Chairman, also with a double vote. The Ordinary Meetings of Senatus are held on the first Saturday after the opening of the Winter Session; the last Saturdays of November, January, February and March; the Saturday immediately preceding the Christmas vacation; the last Fridays of May, June and July; and, for conferring Degrees, in April and July on days to be fixed at the December Meeting of the Senatus of the preceding year. Extraordinary Meetings may be called by the Principal or by three Professors. One-third of the Senatus constitutes a quorum.

The Secretary of Senatus, among other duties, summons the Meetings, prepares the Minutes, and intimates business assigned to the Principal, the Faculties, the Boards of Studies, &c. He also administers the *Sponsio Academica* to Graduates.

FACULTIES.

The University now contains six Faculties, as constituted by Ordinance in 1893—viz., Arts, Science, Divinity, Law, Medicine, and Music. Each Faculty is presided over by a Dean, who is elected by the Professors of his Faculty, and who, among other duties, presents to the Chancellor or Vice-Chancellor the Graduands of his Faculty. The names of the present Deans are given on pp. 2, 3, and 4. The Chairs in the various Faculties are here given in chronological order. The Faculties as previously constituted are given in the CALENDAR for 1893-94, and in previous CALENDARS.

FACULTY OF ARTS.

The Faculty of Arts embraces the Chairs of Humanity (Latin), Greek, Mathematics, Logic and Metaphysics, Moral Philosophy, Natural Philosophy, Hebrew and Semitic Languages, History (two Chairs), Rhetoric and English Literature, Sanskrit and Comparative Philology, Commercial and Political Economy, Education, Fine Art, and Celtic.

REGENTS AND PROFESSORS IN THE FACULTY OF ARTS SINCE 1583.

Regents of Philosophy, 1583-1708.

[*The Regents of Philosophy taught in rotation the four classes in the Curriculum of Arts, the "Bajans," the "Semi-Bajans," the "Bachelors," and the "Magistrands," as the Students of the first, second, third, and fourth year were respectively styled. Each Regent therefore taught every subject in the Curriculum—the Regent of Humanity being subordinate to the Regent of Philosophy, and being employed as a tutor in Classics for Unmatriculated Students. In 1708 the system was changed, and separate Professors for Latin, Greek, Logic and Metaphysics, Moral Philosophy and Natural Philosophy, were substituted for the Regents. A Professorship of Mathematics had previously existed.*]

1583. Robt. Rollock, *first Regent*
1583. Duncan Nairn
1585. Charles Lumisdaill
1586. Adam Colt
1895. Alexander Scrimgeour
1587. Philip Heslop
1588. Charles Ferme or Fairholm
1589. Henry Charteris
1589. Patrick Sands
1594. George Robertson
1597. William Craig
1597. John Adamson
1598. James Knox
1598. Robert Scott
1601. Andrew Young
1603. James Reid
1604. David Munro
1606. Blase Colt
1607. James Fairley
1608. William King
1611. Andrew Stevenson
1625. Samuel Rutherford
1625. Robert Ranken
1626. Thomas Crawford
1626. John Brown
1631. Alexander Hepburn

1636. James Wyseman
1638. James Wright
1638. Robert Young
1639. Duncan Forrester
1644. William Tweedie
1644. James Pillans
1647. Andrew Suttie
1653. John Wishart
1665. George Sinclair
1666. John Wood
1667. William Paterson
1679. Gilbert M'Murdoch
1679. Andrew Massie
1680. Alexander Cockburn
1682. Robert Lidderdail
1684. Herbert Kennedy
1686. Thomas Burnet
1689. Alexander Cunningham
1690. William Law
1695. John Row
1695. William Scott
1701. Charles Areskine
1703. Robert Stewart
1707. Colin Drummond

Regents of Humanity, 1597-1708.

1597. John Ray
1606. Blase Colt
1611. Oliver Colt
1611. Robert Burnet
—— Andrew Stevenson
1623. Samuel Rutherford
1626. Thomas Craufurd
1630. John Armour
1633. Alexander Gibson
1636. James Wyseman
1638. Robert Young
1644. James Pillans
1653. John Wishart
1656. William Forbes
1656. James M'Gowan
1658. Hugh Smith
1663. William Cumming
1665. Andrew Ross
1665. Thomas Bell
1676. Gilbert MacMurdo
1679. Alexander Cunningham
1689. John Drummond

Professsors of Mathematics.

1620. Andrew Young
1640. Thomas Craufurd
1674. James Gregory
1683. David Gregory
1692. James Gregory
1725. Colin M'Laurin
1747. Matthew Stewart
1775. Dugald Stewart
1785. Adam Ferguson
1785. John Playfair
1805. John Leslie
1819. William Wallace
1838. Philip Kelland
1879. GEORGE CHRYSTAL

Professors of Humanity.

1708. Laurence Dundas
1728. Adam Watt
1734. John Kerr
1741. George Stuart
1775. John Hill
1806. Alexander Christison
1820. James Pillans
1863. William Young Sellar
1891. Harry Chester Goodhart
1895. WILLIAM ROSS HARDIE

Professors of Greek.

1708. William Scott, *one of the Regents*
1729. William Scott, *secundus*
1730. Colin Drummond
1738. Robert Law
1741. Robert Hunter
1772. Andrew Dalziel
1805. George Dunbar
1852. John Stuart Blackie
1882. SAMUEL HENRY BUTCHER

Professors of Logic and Metaphysics.

1708. Colin Drummond, *one of the Regents*
1730. John Stevenson
1774. John Bruce
1786. James Finlayson
1808. David Ritchie

1836. Sir Wm. Hamilton, Bart.
1856. Alex. Campbell Fraser
1891. ANDREW SETH PRINGLE PATTISON

Professors of Moral Philosophy.

1708. William Law, *one of the Regents*
1729. William Scott
1734. John Pringle
1745. William Cleghorn
1754. James Balfour
1764. Adam Ferguson
1785. Dugald Stewart
1810. Thomas Brown
1820. John Wilson
1853. P. C. M'Dougall
1868. Henry Calderwood
1898. JAMES SETH

Professors of Natural Philosophy.

1708. Robert Stewart, *one of the Regents*
1742. John Stewart
1759. Adam Ferguson
1764. James Russell
1774. John Robison
1805. John Playfair
1819. Sir John Leslie
1833. James David Forbes
1860. PETER GUTHRIE TAIT

Professors of Hebrew and Semitic Languages.

(See Faculty of Divinity.)

Professors of History.

1719. Charles Mackie
1753. John Gordon
1754. William Wallace
1755. John Pringle
1780. Alexander Fraser Tytler
1801. William Fraser Tytler
1821. Sir William Hamilton
1837. George Skene
1842. James Frederick Ferrier
1846. Cosmo Innes
1874. Æneas Jas. Geo. Mackay
1881. JOHN KIRKPATRICK
1894. George W. Prothero
1899.[1]

Professors of Rhetoric and English Literature.

1762. Hugh Blair
1784. William Greenfield
1801. Andrew Brown
1835. George Moir
1840. William Spalding
1845. William Edmondstoune Aytoun
1865. David Masson.
1895. GEORGE SAINTSBURY.

Professors of Sanskrit.

1862. Theodor Aufrecht
1875. JULIUS EGGELING

Professors of Political Economy.

(See also Faculty of Law.)

1871. W. B. Hodgson
1880. JOSEPH SHIELD NICHOLSON

Professor of Education.

1876. SIMON SOMERVILLE LAURIE

Professor of Fine Art.

1880. GERARD BALDWIN BROWN

Professor of Celtic Languages, &c.

1882. DONALD MACKINNON

FACULTY OF SCIENCE.

[As Constituted in 1893 by Ordinance No. 12 (General No. 7).]

This Faculty embraces the Chairs of Mathematics, Natural Philosophy, Botany, Anatomy, Chemistry, Physiology, Natural History, Astronomy, Agriculture, Engineering, Geology, and Public Health.

[1] Vacant at date of going to Press.

PROFESSORS IN THE FACULTY SINCE ITS INSTITUTION IN 1893.

For Professors of Mathematics and Natural Philosophy, see under Faculty of Arts. For Professors of Botany, Anatomy, Chemistry, Physiology, Natural History, see under Faculty of Medicine.

Professors of Practical Astronomy.

1786. Robert Blair
1834. Thomas Henderson
1846. Charles Piazzi Smyth
1889. RALPH COPELAND

Professors of Agriculture.

1790. Andrew Coventry
1831. David Low
1854. John Wilson
1885. ROBERT WALLACE

Professors of Engineering.

1868. Fleeming Jenkin
1885. GEORGE FREDERICK ARMSTRONG

Professors of Geology.

1871. Archibald Geikie
1882. JAMES GEIKIE

Professor of Technology.

1855. George Wilson
[Chair abolished in 1859.]

Professor of Public Health.

1898. CHAS. HUNTER STEWART

FACULTY OF DIVINITY.

This Faculty, the second in date, consists of the Chairs of Divinity, Hebrew and Semitic Languages, Ecclesiastical History, and Biblical Criticism and Antiquities.

PROFESSORS IN THE FACULTY OF DIVINITY SINCE 1620.

Professors of Divinity.

1620. Andrew Ramsay
1627. Henry Charteris
1629. James Fairley
1630. John Sharpe
1648. Alexander Colvill
1649. Samuel Rutherford
1650. David Dickson
1662. Patrick Scougall
1664. William Keith
1675. Laurence Charteris
1682. John Menzies
1683. John Strachan
1690. George Campbell
1701. George Meldrum
1709. William Hamilton
1732. James Smith
1733. John Gowdie
1754. Robert Hamilton
1779. Andrew Hunter
1809. William Ritchie
1828. Thomas Chalmers
1844. John Lee
1859. Thomas J. Crawford
1876. ROBERT FLINT

Professors of Hebrew.

1642. Julius Conradus Otto
1656. Alexander Dickson
1679. Alexander Amedeus
1681. Alexander Douglas
1692. Patrick Sinclair
1694. Alexander Rule
1702. John Goodall
1719. James Crawford
1732. William Dawson
1751. James Robertson
1792. George Husband Baird
1793. William Moodie
1812. Alexander Murray
1813. Alexander Brunton
1848. David Liston
1880. David Laird Adams
1892. John Dobie
1895. ARCHIBALD ROBERT STIRLING KENNEDY

Professors of Ecclesiastical History.

1702. John Cumming
1715. William Dunlop
1726. Matthew Crawford
1737. Patrick Cumming
1762. Robert Cumming
1788. Thomas Hardie
1799. Hugh Meiklejohn
1831. David Welsh
1844. James Robertson
1861. William Stevenson
1872. Robert Wallace
1876. Malcolm Campbell Taylor

Professors of Biblical Criticism and Biblical Antiquities.

1847. Robert Lee
1868. Arch. Hamilton Charteris
1898. John Patrick

FACULTY OF LAW.

To this Faculty belong seven Chairs, viz.:—Public Law, Civil or Roman Law, History (Constitutional, &c.), Scots Law, Forensic Medicine, Conveyancing, and Political Economy.

Professors in the Faculty of Law since 1707.

Professors of Public Law.

1707. Charles Areskine
1734. William Kirkpatrick
1735. George Abercrombie
1759. Robert Bruce
1764. James Balfour
1779. Allan Maconochie
1796. Robert Hamilton
1832. * * *
1862. James Lorimer
1890. Sir Ludovic Grant, Bt.

Professors of Civil Law.

1710. James Craig
1732. Thomas Dundas
1745. Kenneth M'Kenzie
1755. Robert Dick
1792. John Wilde
1800. Alexander Irving
1827. Douglas Cheape
1842. A. Campbell Swinton
1862. James Muirhead
1889. Henry Goudy
1893. James Mackintosh

Professors of History (Constitutional, &c.).

1719. Charles Mackie
1753. John Gordon
1754. William Wallace
1755. John Pringle
1780. Alex. Fraser Tytler
1801. William Fraser Tytler
1821. Sir William Hamilton
1837. George Skene
1842. James Frederick Ferrier
1846. Cosmo Innes
1874. Æneas Jas. Geo. Mackay
1881. John Kirkpatrick

Professors of Scots Law.

1722. Alexander Bayne
1737. John Erskine
1765. William Wallace
1786. David Hume
1822. George Joseph Bell
1843. John Schank More
1861. George Ross
1864. George Moir
1865. Norman Macpherson
1888. John Rankine

Professors of Forensic Medicine.

1807. Andrew Duncan, *secundus*
1820. William Pulteney Alison
1822. Robert Christison
1832. Thomas Stewart Traill
1862. Sir Douglas Maclagan
1897. Sir Henry Duncan Littlejohn

Professors of Conveyancing.

1825. Macvey Napier
1847. Allan Menzies
1856. A. Montgomerie Bell
1866. James Stuart Fraser Tytler
1892. JOHN PHILP WOOD

Professors of Political Economy.[1]

1871. W. B. Hodgson
1880. JOSEPH SHIELD NICHOLSON

FACULTY OF MEDICINE.

The Faculty consists of thirteen Chairs:—Botany, Physiology, Medicine, Anatomy, Chemistry, Midwifery, Natural History Materia Medica, Surgery, Clinical Surgery, Forensic Medicine, Pathology, and Public Health. The Professors of Medicine, Materia Medica, Pathology, and Midwifery (for Diseases of Women), are also Professors of Clinical Medicine. Some of these Chairs were instituted in the seventeenth century, but it does not appear that the Medical School and Faculty of the University were established until the beginning of last century.

PROFESSORS IN THE FACULTY OF MEDICINE SINCE 1676.

Professors of Botany.

1676. James Sutherland
1706. Charles Preston
1712. George Preston

Professors of Medicine and Botany.

1738. Charles Alston
1761. John Hope
1786. Daniel Rutherford
1820. Robert Graham
1845. John Hutton Balfour

Professors of Botany.

1879. Alexander Dickson
1888. ISAAC BAYLEY BALFOUR

Professors of Medicine.

1685. Sir Robert Sibbald, James Halket, Archibald Pitcairne

Professors of Institutes of Medicine or Physiology.

1724. William Porterfield
1726. Andrew St Clair, John Rutherford
1747. Robert Whytt
1766. William Cullen
1773. Alex. Monro Drummond
1776. James Gregory
1789. Andrew Duncan
1819. Andrew Duncan, *secundus*
1821. William Pulteney Alison
1842. Allen Thomson
1848. John Hughes Bennett
1874. William Rutherford
1899.[2]

Professors of Medicine.

1724. William Porterfield
1726. Andrew St Clair, John Rutherford
1747. Robert Whytt
1766. John Gregory
1773. William Cullen
1790. James Gregory
1821. James Home
1842. William Pulteney Alison
1855. Thomas Laycock
1876. Sir THOMAS GRAINGER STEWART

[1] This Chair was declared to be a Professorship in the Law as well as in the Arts Faculty by resolution of the Senatus Academicus in 1879.

[2] Vacant at date of going to Press.

Professors of Anatomy.
1705. Robert Elliot
1708. Adam Drummond
1716. John M'Gill
1720. Alexander Monro
1754. Alex. Monro, *secundus*
1798. Alexander Monro, *tertius*
1846. John Goodsir
1867. Sir WILLIAM TURNER

Professors of Chemistry and Medicine.
1713. James Crawford
1726. Andrew Plummer
1726. John Innes
1755. William Cullen
1766. Joseph Black
1795. Thomas Charles Hope

Professors of Chemistry.
1844. William Gregory
1858. Lyon Playfair
1869. ALEX. CRUM BROWN

Professors of Midwifery.
1726. Joseph Gibson
1739. Robert Smith
1756. Thomas Young
1780. Alexander Hamilton
1800. James Hamilton
1840. Sir J. Y. Simpson, Bart.
1870. ALEX. RUSSELL SIMPSON

Professors of Natural History.
1770. Robert Ramsay
1779. John Walker
1804. Robert Jameson
1854. Edward Forbes
1855. George James Allman
1870. Sir Wyv. T. C. Thomson
1882. JAMES COSSAR EWART

Professors of Materia Medica.
1768. Francis Home
1798. James Home
1821. Andrew Duncan, *secundus*
1832. Sir Robt. Christison, Bart.
1877. THOMAS RICHARD FRASER

Professors of Surgery.
1777. Alex. Monro, *secundus*
1798. Alexander Monro, *tertius*
1831. John William Turner
1836. Sir Charles Bell
1842. James Miller
1864. James Spence
1882. JOHN CHIENE

Professors of Clinical Surgery.
1803. James Russell
1833. James Syme
1869. Joseph Lister
1877. THOMAS ANNANDALE

Professors of Forensic Medicine
(See Faculty of Law.)

Professors of Pathology.
1831. John Thomson
1842. William Henderson
1869. W. R. Sanders
1881. WM. SMITH GREENFIELD

Professors of Military Surgery.
1806. John Thomson
1823. Sir George Ballingall
[Chair abolished.]

Professor of Public Health.
1898. CHAS. HUNTER STEWART

FACULTY OF MUSIC.

Reid Professors of Music
1839. John Thomson.
1841. Sir Henry Rowley Bishop
1844. Henry Hugh Pearson
1845. John Donaldson
1865. Sir Herbert Stanley Oakeley
1891. FREDERICK NIECKS

The Principal is a member of this Faculty *ex officio*, and Professor Kirkpatrick was appointed a member by the Senatus.

GENERAL COUNCIL OF THE UNIVERSITY.

The Chancellor, the Members of the University Court, the Professors, and the Graduates, are entitled to be registered as Members of the General Council. The fee for registration is £1.

The Register, now containing 8253 Members, is conclusive of the rights of persons to be Members up to 1st January 1900. By the Universities Elections Amendment (Scotland) Act all candidates for graduation must pay the Registration Fee before they can appear for graduation.

Under the Universities Act of 1858, and the Commissioners' Ordinance No. 1, section 3, the Council meets twice a year viz., on the *first Wednesday of May*, and on the *last Friday in October*, at three o'clock P.M., "*to take into their consideration* all questions affecting the well-being and prosperity of the University, and to *make representations from time to time on such questions* to the *University Court*, who shall consider the same, and return to the Council their deliverance thereon." All proposed improvements in the arrangements of the University "shall be submitted to the University Council for their consideration."

By the Universities Act 1889, besides the two statutory meetings above mentioned, the Council "may hold special meetings at the instance of the Chancellor, who shall convene such meetings on a requisition from a quorum of members, and the Council may adjourn any meeting, and may appoint Committees to investigate into and report upon any matter remitted to them or to carry out instructions given to them by the Council." The Commissioners under this Act have fixed the quorum of the General Council at ten for every thousand or fraction of a thousand of members on the register, but this provision does not apply to the statutory half-yearly meetings, or to adjourned meetings.

At the meetings of the General Council, in the absence of the Chancellor, Rector, and Principal, the Chancellor's Assessor, and in his absence the Rector's Assessor shall preside; and in the absence of all of these, a Chairman shall be elected by the meeting, but no member of Senatus can preside at any meeting held for the election of an Assessor or Assessors. The

Chairman shall decide all points of order, and has a deliberative and a casting vote; and in case of an equality of votes at the conclusion of a poll, the Chairman, or any one appointed by the University Court to act for him, shall have a casting vote.

The General Council of this University, and that of the University of St Andrews together, return a Member of Parliament.

The *Chancellor* of the University and *four of the Assessors* in the University Court are elected by the Council. The Chancellor holds office for life, and the Assessors for four years. Two of the Assessors retire biennially, but may be re-elected. In case of a casual vacancy the person elected to fill it retires when the person whom he succeeded would in ordinary rotation have retired. No member of the Senatus can vote or take part in the election of any Assessor of the General Council. The next election of two Assessors will take place at the statutory half-yearly meeting in *October* 1899.

Members of the General Council may borrow books from the Library and have out at one time five volumes on payment of an annual fee of 10s. 6d., or a single payment of £5; or may have ten volumes on payment of an annual fee of £1, 1s., or a single payment of £10.

Two Standing Committees are appointed by the General Council—viz., a Business Committee and a Finance Committee. The Conveners are:

Business Committee—J. Campbell Lorimer, LL.B.

Finance Committee—David D. Buchan, LL.B.

STUDENTS' REPRESENTATIVE COUNCIL.

Presidents—John D. Comrie, M.A., B.Sc., V. E. Sorapure, and A. F. Black, M.A. *Joint Hon. Secretaries and Treasurers*—William C. Ross, 27 Pitt Street, and L. C. Peel Ritchie, 1 Melville Crescent. *Hon. Auditor*—James Walker, C.A.

The Students' Representative Council was founded in 1884. Its functions are—(1) To represent the Students in matters affecting their interests; (2) To afford a recognised means of communication between the Students and the University authorities; and (3) To promote social life and academic unity among the Students. The Council is elected annually in

November, partly by the Students of the different Faculties, and partly by the recognised Students' societies. The Ordinary Meetings are held in November, December, January, February, March, May, June, July, and October. At the November meeting an executive committee is elected, consisting of the three presidents, two secretaries and treasurers, and eleven other members, representing the five Faculties. The Council also carries out its work by means of the following Standing Committees:—The Inter-Universities, Library, Social Residence, Amusements, *Student*, International Academic and Women's Committees. During the Winter Session it publishes weekly a University Magazine.

The Commissioners, acting under the Universities Act 1889, have issued an Ordinance to the following effect:—

(1) The Students' Representative Council shall submit to the University Court the regulations under which it exists, and these regulations as approved shall form the constitution of the Students' Representative Council.

(2) After the University Court has approved of the constitution, alterations must receive the approval of the University Court.

(3) 1. The Council may petition the Senatus as to any matter affecting the teaching and discipline of the University, and the Senatus shall dispose of the matter, or shall, if so prayed, forward such petition to the University Court, with such observations as it may make thereon.

2. The Council may petition the University Court as to any matter affecting the Students other than those falling under sub-section 1.

3. This Section shall not prejudice any right of appeal under Section 6, sub-section 2, of the said Act, nor the powers and jurisdiction of the Senatus, as to teaching and discipline.

MATRICULATION.

University Matriculation consists in signing the Sponsio Academica, the Student thus entering his or her name in the Album of Students of the University, and in paying a fee of £1, 1s. for the academic year (1st Oct. to 1st Oct.), or a fee of 10s. 6d. for a Summer Session (1st May to 1st October). No person shall be deemed to be a Matriculated Student or shall enjoy any of the privileges of a Matriculated Student unless, in addition to paying the matriculation fee, he is enrolled as a Student in attendance in one or more classes in the University, and has paid the fees entitling him to such attendance: Provided that nothing herein contained shall affect the right of the University Court to exact a fee in lieu of and not exceeding the matriculation fee from any candidate for any examination or

for graduation, not being at the time a Matriculated Student, in addition to the fee payable for such examination or graduation. No one can attend a University Class without matriculating, except in those special cases in which an Entrance Fee of 5s. only is exacted (see page 29).

The Matriculated Students elect the Rector of the University. In case of an equality of votes, the Chancellor, or failing him, the Principal, has the casting vote. Students are also admitted to the University Library, and on certain days to the Museum of Natural History.

Candidates for Graduation who are attending Extra-Academical Lectures in Edinburgh, and not attending Classes within the University, must, at the beginning of each year, enrol their names in a book kept for that purpose, and pay a Fee of the same amount as the Matriculation Fee. In respect of such payment they have a right to use the University Library.

Sponsio Academica signed by students on matriculating :—

QUOD FAUSTUM FELIXQUE SIT. A. D.——

Ego Universitatis Academicae Edinburgensis Discipulus sinceré ac sancté promitto quod et syngraphâ hac meâ in perpetuum testatum cupio, mihi ante omnia cordi ac curae futurum verae pietatis studium ; me etiam in assuetis academici curriculi studiis sedulum fore, ut adolescentem bene institutum decet ; et quamdiu in illo curriculo permansero praeceptoribus omnibus morigerum memet praestiturum, nec ullius dissidii aut tumultus clam palamve vel auctorem vel participem futurum, et per reliquam vitam Universitatem Academicam Edinburgensem ipsam grato et benevolo animo prosecuturum, idque omnibus officiis pro facultate mea et occasione data testaturum esse.

MATRICULATIONS (1st May 1898 to 1st May 1899).

FOR SUMMER SESSION 1898 :—

I.	Faculty of Arts	11
II.	Faculty of Science	8
III.	Faculty of Divinity	0
IV.	Faculty of Law	9
V.	Faculty of Medicine	25
		53

Summer Session 1898 brought forward,		53
For Academic Year:—		
I. Faculty of Arts	800	
II. Faculty of Science	148	
III. Faculty of Divinity	64	
IV. Faculty of Law	360	
V. Faculty of Medicine	1365	
VI. Faculty of Music	18	
	——	2755
Total Matriculations (1st May 1898 to 1st May 1899)		2808

Non-Matriculated Extra-Academical Graduation Students (1st May 1898 to 1st May 1899).

I. Faculty of Medicine:—		
Summer Session 1898	2	
Academic Year 1898-99	86	
Total Non-Matriculated Extra-Academical Students (1st May to 1st May)		88

The University Court may admit non-Matriculated Students to any Class, on payment of an Entrance Fee (fixed at 5s.) in addition to the Class Fee; but such attendance (1) will not qualify for Graduation, (2) nor entitle the Student to a Certificate of Attendance, (3) nor confer any other University privilege.

Courses which may be attended under this Regulation: -

Fine Art, short additional Courses on.
Procedure and Evidence.
Mental Diseases.
Diseases of the Eye.
Clinical Instruction on Diseases of Children.
Comparative Embryology.
Forestry.
Agricultural Entomology.
Music Classes.
Practical Pathological Bacteriology.
Chemical Laboratory.
Experimental Pharmacology.
Italian Language and Literature.
Celtic (for Classes not qualifying for Graduation).
German Lit. and Prose Comp. Courses, twenty lectures each.
Advanced Practical Physiology.

International Private Law.
Physics for non-Graduation Women Students of Medicine.
Diseases of Tropical Climates.

Number of Non-Matriculated Students who have paid the Entrance Fee 1st May 1898 to 1st May 1899—51.

Other Courses may be sanctioned under this Regulation.

Students are subject to the disciplinary jurisdiction of the Senatus. Among offences visited with severe academic penalties may be mentioned riotous or disorderly conduct, copying at examinations, and mutilating or disfiguring books belonging to the Library.

UNIVERSITY EXAMINERS.

The Examiners for Degrees are the Professors of, or Lecturers on, the different subjects, along with additional Examiners appointed by the University Court. As a general rule, no Professor, Lecturer, or University Assistant or Demonstrator can be appointed an additional Examiner.

GRADUATION CEREMONIALS.

The relative precedence of each Faculty is as follows:—1. Divinity; 2. Law; 3. Medicine; 4. Arts; 5. Science; 6. Music. The Deans take precedence in their respective Faculties, followed by the Members of their Faculties in the order of the dates of their Commissions.

Public Graduation Ceremonials are held annually about the middle of April (chiefly for Divinity, Law, Arts, Science, and Music), and about the end of July (for Medicine and Science). A special Ceremonial is usually held about the end of October (chiefly for Degrees in Medicine).

Graduates must appear on these occasions in Academic Costume.

ACADEMIC COSTUME.[1]

Chancellor.—Robe of Black Brocaded Satin, trimmed with Gold Lace, and with Gold Frogs down fronts and on sleeves. Black Silk Velvet Trencher, with Gold Button and Tassel.

Vice-Chancellor.—Robe and Trencher same as Chancellor's, but trimmed with Silver in place of Gold.

Rector.—Black Silk Gown, with Crimson Silk Velvet sleeves. The gown is trimmed round the collar and down the front edges with Broad Gold Lace, and the sleeves round bottom with a narrower Gold Lace. Black Silk Velvet Trencher, with Gold Button and Tassel.

[1] Graduates are requested to appear for Graduation wearing one hood only—viz., the one which indicates the Degree they are about to receive.

Principal.—Mauve Corded Silk Robe trimmed with Velvet to match. Black Silk Velvet Trencher, with Gold Button and Tassel.

Members of University Court.—Black Silk Robe, open sleeve, with Gold Frog on each sleeve.

With all of the above, Hoods appropriate to the Degree are worn.

The ordinary form of Gowns worn by Graduates of the University is the same in all the Faculties—viz., black silk or stuff, with long sleeves. The distinctive part of the costume is in the *Hood* appropriated to each Faculty. These Hoods are as follow :

LL.D.—Black *cloth*, lined with *blue* silk.

LL.B.—Black *silk*, lined with *blue* silk, bordered with white fur.

B.L.—Black *silk*, edged with *blue* silk three inches broad, trimmed with white fur.

D.D.—Black *cloth*, lined with *purple* silk.

B.D.—Black *silk*, lined with *purple* silk, bordered with white fur.

M.D.—Black *cloth*, with appended cape, lined and faced with *crimson* silk.

M.B. and C.M.—Black *silk*, lined with *crimson* silk, bordered with white fur.

D.Sc.—Black *cloth*, lined with *green* silk.

B.Sc.—Black *silk*, lined with *green* silk, bordered with white fur.

M.A.—Black *silk*, lined with *white* silk.

D.Litt.—Black *cloth*, lined with *royal blue* and *maize shot silk*.

D.Phil.—Black *cloth*, lined with *Vesuvius* and *white shot silk*.

Mus.D.—Rich scarlet *cloth*, with rich *white* corded silk lining.

Mus.B.—Scarlet *silk*, with *white* silk lining, edged with *white* fur.

The full Academic Dress for Doctors is a Gown of superfine Scarlet Cloth, loose sleeves, the cape and facings down the front covered, and the sleeves lined, with rich silk of the colour proper to the Degree. Birretum of black silk velvet.

REGULATIONS OF UNIVERSITY COURT.

I.—Absence of Professors.

1. When any Professor shall be prevented from teaching his Class for more than three successive days, an arrangement shall be made for his Class being taught in his absence ; and such arrangement shall be intimated to the Dean of his Faculty.

2. When any Professor has reason to expect that the demands of his Profession may involve absence from duty for more than four days in all in the course of a Session, an arrangement similar to that in Regulation 1 shall be made and intimated to the Dean of his Faculty.

3. No arrangement for teaching a Class in absence of the Professor shall continue longer than one week without the sanction of the Senatus Academicus ; or, if there be no sufficiently early meeting of the Senatus, without the *interim* sanction of the Principal and Deans Committee.

4. When any Professor shall contemplate an absence from duty of

more than one week, it shall be necessary for him to obtain the sanction of the Senatus for such absence, and for the arrangements for teaching his Class; and if his contemplated absence extend to four weeks or upwards, the sanction of the Senatus shall require the confirmation of the University Court.

5. No Professor shall employ any one other than a Colleague or University Assistant to teach his Class for him, without obtaining the sanction of his Faculty; and such sanction shall be communicated to the Senatus at its first meeting thereafter.

6. The Statement of the arrangements for teaching a Class in the absence of the Professor, submitted to the authorities of the University, shall specify the remuneration proposed to be given to the Professor's Substitute.

II.—Absence of Examiners.

1. Any University Examiner who finds himself prevented from being present at any Examination at which it is his duty to act, shall intimate this to the Dean or other Chairman of his Examining Board, who, on receiving such intimation, or otherwise becoming aware of the absence of the Examiner, shall, if possible, appoint a properly qualified Substitute to act for such Examiner.

2. In every case in which a person is appointed to act as Substitute for a University Examiner, and in which his Faculty, or Examining Committee, shall consider it necessary that the Substitute shall receive remuneration, the rate of remuneration to be paid by the Examiner (whether a Professor or Additional Examiner) to his Substitute shall be fixed by the Faculty, or Examining Committee, and shall be based upon the amount of the Fees payable to the Additional Examiners attached to the Faculty or Examining Committee.

3. All absences of University Examiners, their duration and cause, and the relative arrangements made, shall be immediately reported for approval to the Senatus Academicus by the Chairman of the Board to which the absent Examiner is attached; and a similar Report shall in every case of the absence of a University Examiner be made by the Senatus Academicus to the University Court; provided always that such arrangements shall receive immediate effect when circumstances do not permit the previous approval of the Senatus Academicus to be obtained.

4. In every case in which a Professor shall apply for leave of absence from his duties generally, provision shall be made, under the existing Regulations regarding leave of absence to Professors, for the performance of his duties as Examiner, as well as for the performance of his duties as Teacher; and provision shall be made for the remuneration of his Substitute in both capacities.

III.—Applications for Additional (or Non-Professorial) Examinerships in the University.

1. Applicants should lodge sixteen copies of their applications (one

of which should be signed), and sixteen copies of any testimonials they may desire to present, with the Secretary of the Court, not later than one week before the day fixed for making appointments in each case.

2. Applicants who send in testimonials must not send more than four for any one appointment.

3. Persons may be appointed to examine in two of the thirteen Subjects of the Examinations for Graduation in Medicine, but not more, and not in more than one Subject in any one Division of the Examinations.

4. Every applicant for an appointment in Divinity must hold the degree of B.D. from a Scottish University.

Every applicant for an Examinership in Law must be a Bachelor of Laws of a Scottish University.

IV.—Opening of New Classes.

No class in addition to those existing in the University shall at any time be opened,—whether for the purpose of dividing the course on a subject necessary for graduation, or for teaching a class not requisite for graduation,—without the approval of the Senatus and the sanction of the University Court.

V.—Recognition of Extra-Academical Teachers.

1. Every applicant for recognition shall furnish for the information of the Authorities of the University :—

(1.) A Statement of his Registered Qualification or Qualifications, and of the name of the Office, or Appointment (if any) which he holds, as a Teacher of the Subject in which he requests recognition.

(2.) A Syllabus of his Course of Lectures; or, in the case of a Practical Class, information of a similar kind.

(3.) A Statement of the number of Lectures, and of the number of Written or Oral Examinations in the Course; or, in the case of a Practical Class, information of a similar kind.

(4.) A Short Description of his Accommodation for a Class; and of the Apparatus, Illustrative Specimens, Diagrams, and other appliances, at his disposal for teaching the Subject in which he desires recognition.

(5.) A Statement of his opportunities of studying the Subject, and of the length of time devoted thereto.

(6.) A Statement of the experience he has had in teaching the Subject.

(7.) A Note of the Titles of his published Contributions to the Science of the Subject.

(8.) A Statement as to whether his Course or Courses of Instruction have been already recognised by any University or other examining body, and, if so, what means were adopted for ascertaining his qualifications for teaching.

2. In the case of every Applicant for recognition residing in Edin-

burgh or its neighbourhood, an inspection shall be made of his teaching Appliances and Accommodation for teaching.

3. Every recognised Extra-Academical Teacher shall annually furnish the University with the information regarding his Course or Courses which is required from the University Professors as to (1.) The number of Students attending the recognised Course or Courses of Instruction; (2.) The number of meetings for ordinary Class Work in the Session, and in each week thereof; (3.) The number of Special Written Examinations; (4.) The system of conducting the ordinary Class Work, and the number of meetings devoted to each kind of work.

4. The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the duration of the Course and the number of Meetings for Systematic, Tutorial, and Practical Instruction, respectively; the number of occasions on which attendance was ascertained, and the number of those occasions on which the Student was present; and the number of Class Examinations held during the Course, and whether or not the Student has taken a satisfactory part in the work of the Course, including the Class Examinations, if any. The Certificate should also state the general scope of the Course; and, in particular, in the case of Chemistry, that the Course included Organic as well as Inorganic Chemistry; in the case of Midwifery, that it included the diseases of Women and Children; and, in the case of Practical Materia Medica, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

5. When application is made for the recognition of a Course taught by two or more Teachers in conjunction, information shall be given of the share to be taken by each Teacher in such conjoined Course; and the recognition of such conjoined Courses, and of each of the persons recognised as Teachers of a conjoined Course shall, *ipso facto*, terminate should one or more of the Teachers cease to conduct the Course, or should any material change be made in the share of each Teacher in the teaching of the conjoined Course.

6. The recognition of any Teacher who fails to furnish the information called for in Section 3, or an explanation relative to such failure; or who has ceased for the period of two consecutive Sessions to teach the subject on which he is recognised, shall, *ipso facto*, terminate.

———o———

University Buildings.

THE University Buildings at present consist of: (1) The College, or University (Old) Building, with Dome, in South Bridge Street; (2) The New Buildings (School of Medicine), Teviot Place; and (3) The Music Class Room, Park Place.

I.—THE UNIVERSITY (OLD) BUILDING.

The Old Building, on the site of "Kirk o' Field," the scene of the murder of Darnley, contains the Library and Reading Rooms: the Class Rooms of the Faculties of Arts, Divinity, and Law, the Natural History, and some other Science Class Rooms; the Theological Library and Reading Room; the Examination Hall; the Physical, and the Geological and Petrological Laboratories; the Fulton Engineering Laboratory; the Physical, Geological, Fine Art, and Natural History Museums; the Senate Hall, University Court Room, and the Offices of the Senatus, the Court, and the Students' Representative Council.

The work of teaching began in 1583, but before the end of the eighteenth century, the professors and students had been very imperfectly housed. In a Memorial, dated 1768, Principal Robertson complains that the buildings, "poor in themselves, seem not to have been carried on according to any regular plan, such as takes place in other academical structures which have been erected on more opulent foundations; and hence the whole fabric has a mean, irregular, and contemptible appearance." At that time the number of students was between six and seven hundred, and that of professors twenty-one.

Twenty years later a writer in the "Scots Magazine" complains that "in 1788 the buildings of the University are in the same ruinous condition that they were in in 1768, and the most celebrated University at present in Europe is the worst accommodated." A scheme for rebuilding, often discussed, was now taken up seriously by the Town Council, encouraged by promise of liberal aid from Government. A plan was obtained from Robert Adam, then at the height of his reputation, and the foundation stone of "the New College of Edinburgh" was solemnly laid on 16th November 1789.

Adam's original plans, preserved in the Soane Museum in London, divide the space now occupied by the College buildings into two quadrangles, a smaller to the east, entered as now from South Bridge Street, and a larger beyond it to the west, with a block of academic buildings lying between. This arrangement was doubtless suggested by the rapid rise of the

ground from north-east to south-west. Round these two courts there were to be Class Rooms, Museums, a Library, and also houses for the Principal and Professors. The western side of the larger court was to be occupied by a Graduation Hall and Chapel; and the great quadrangle was to be flanked with corridors, affording communication between the class-rooms. The building, begun chiefly on the eastern and northern sides, was, however, soon stopped by the death of the architect in 1792, and by failure of funds. In 1815 a Government Commission was appointed to collect funds and to carry out the undertaking, though in a modified form. They invited plans "for finishing the College of Edinburgh, on a reduced scale, leaving out the south front, and the cross building, which formed the small court in the original plan,—regard being always had to the part already executed, and to the preservation of the architecture of Mr Adam, as far as practicable." Out of nine sets of plans sent in, those of William Henry Playfair were selected, and under his superintendence the work was practically completed in 1828, at a total cost of about £161,000.

The general character of the whole design is due to Robert Adam. Some portions were erected by him, or completed after his death from his drawings. In other parts some modification of his plans and elevations was necessary, while a third portion had to be designed anew by Playfair, who was careful to conform to Mr Adam's design. The handsome eastern façade, with its monolithic columns 22 feet in height, was erected by Adam, who intended to have embellished it with a certain amount of sculpture. He also erected the north-west corner of the great court, of which the circular Loggie form an admired feature, carried out part of the north side, and began the western block. Playfair threw the two courts into one, and designed the north and south interior elevations anew. In the western block he adhered to Adam's designs; but the interior treatment of the block, fitted up for the Natural History Museums, is his own; and the "Upper Museum," now the Natural History Laboratory, is a good specimen of his style. The "circular corners" designed by Adam for his great court

were retained by Playfair for his single quadrangle. On the exterior, the north front is Adam's, and its plainness is due to the fact that only a narrow lane instead of the broad Chambers Street then bounded the College on that side. Adam's handsome design for the south front was simplified by Playfair, but is still superior to the north elevation.

The difficulty of the levels in the quadrangle was satisfactorily overcome by Playfair by surrounding the court with a terrace, which affords a suitable architectural base for the noble buildings rising above it. But Playfair's great achievement is the Library Hall, a fine gallery 185 feet by 54 feet, with an arched ceiling enriched with cassettes.

The general effect of the buildings is simple and dignified. The material is mainly Craigleith stone, and the detail carving is well worked out. The single quadrangle, measuring 242 feet 6 inches from east to west, by 134 feet from north to south, is a great improvement on the original plan of 1789, though the essentials of the design are due to Adam. The interior elevations of the quadrangle, especially on the west, and the eastern front to South Bridge Street, may safely be pronounced excellent specimens of the neo-classic style.

The Dome.

Adam's original design provided for a Dome over the eastern portal, but as his sketch was not very pleasing, no steps were taken to carry out this feature until 1883, when funds came into the possession of the University, bequeathed for this purpose by Robert Cox, Esq., W.S. It was then determined to carry out the Dome on a new design by R. Rowand Anderson, LL.D., Architect of the University New Buildings (School of Medicine). The present Dome, though less purely classical than the Adam-Playfair building, is pleasing and effective. An admirable finial is formed by a vigorous and athletic figure of Youth, bearing the torch of Knowledge, executed in bronze by John Hutchison, Esq., R.S.A. The Dome now contains the Fine Art Museum.

II.—THE UNIVERSITY NEW BUILDINGS.

(SCHOOL OF MEDICINE.)

In 1869 the number of students had risen to fifteen hundred,

and that of the Professors to thirty-three, while there were seventeen Class Rooms only for their use. A Committee was therefore formed in 1873, and an appeal was made to the public for subscriptions for the purchase of a site for and the erection of complete Class Rooms, Theatres, Laboratories, and Museums for the Faculty of Medicine; for reorganising the Class Rooms in the Old Building for the Faculties of Arts, Divinity, and Law; for providing better accommodation for the Library; for erecting a Hall for examinations and academic ceremonials; and for improving the north front of the College building.

This appeal to the public yielded a sum of £148,548, 2s. 5d., which, with a grant of £80,000 from Government, and interest, rents, &c., amounted to £244,587, 4s. 8d.

These buildings (the University New Buildings), begun in 1878, were partly opened for teaching purposes in October 1880, and after their completion, were transferred by the Committee to the University in October 1888. They are situated on a site formerly covered by Teviot Row, Park Street, and Park Place, and were designed by R. Rowand Anderson, LL.D., Architect, and completed under his supervision.

They contain the Lecture Rooms, &c., of the Faculty of Medicine (excepting those of Botany and Natural History), the Museums of Practice of Physic, Anatomy, Chemistry, Obstetrics, Materia Medica, and Surgery; a Students' Reading Room, Students' Common Room, Faculty of Medicine Reception and Reading Rooms, and Office of the Faculty.

The style of architecture is Italian of the Cinque-Cento period, intermediate between the Gothic and the stiff Palladian work, which aims at a mere manipulation of the five orders. The main frontage presents a slightly projecting elevation, pierced by the archway which forms the principal entrance. Over the arch is an ornate window, flanked by pilasters, between which are niches for statuary; and the whole is surmounted by a bold semi-circular pediment, intended to be occupied with sculpture. The façade is three storeys in height except in the projecting west wing, which has an additional floor. On the ground floor the windows are square. Above these runs a well-marked string-course orna-

mented with dentils. The first-floor windows are round-headed and furnished with architraves. Next comes a broad frieze relieved at intervals with circular panels. Over this the string-course is repeated ; and the upper-floor windows are separated by pilasters, and divided by shafts supporting circular tracery. The wall is finished at the top with architrave, frieze, and cornice, and crowned with a low-pitched roof. The external features have of course been influenced by the internal arrangements.

THE M'EWAN HALL.

At a Meeting of the Acting Committee for the University of Edinburgh Buildings Extension Scheme, held on 16th November 1885, it was resolved to apply to Parliament for power to acquire houses in Park Street, adjoining the New Medical Buildings, as a site upon which to erect a University Hall ; and under the Edinburgh University Buildings Extension Act 1886, certain members of the Committee were incorporated as Trustees by the name of the Edinburgh University Buildings Extension Trustees, for the purpose of acquiring the property in question and erecting a Hall. One of their number, Mr William M'Ewan, M.P., munificently offered to contribute the sum required to erect the Hall, as originally contemplated, upon condition of the cost of the site being provided otherwise. A Parliamentary grant of £8000 towards the cost of the site was obtained, and Mr M'Ewan having provided the balance required, the site was purchased. The erection of the Hall was begun in 1888 and finished in 1897, in accordance with the plans of R. Rowand Anderson, LL.D., architect ; the decorations were executed by Mr William M. Palin, artist ; and the Hall is equipped with a Grand Electric Organ, which is of four manuals and pedals, and contains seventy-one stops. The total cost of the Hall to the Donor was about £115,000, and as an architectural monument it is not excelled by any Academic building in the country.

The Greek Theatre forms the basis of the design of the building. The internal diameter is 106 feet, while the height of the dome-light is 90 feet. At the south-west corner is the entrance

to the principal staircase, and on the outer circumference of the circle are two double staircases for access to the galleries. The roof is constructed entirely of steel, is domical in form, deeply panelled in the interior, and has in the centre a circular light 22 feet in diameter, which, with the clerestory windows, admits light to the Hall in the daytime. The external elevation conforms to the architecture of the early Italian Renaissance of the other University New Buildings. The great circle of the Hall is divided vertically by powerful buttresses, while horizontally the lines correspond with those of the north façade of the University New Buildings. The elevation is divided into three stages; the first panelled with circular lights, the second a blank wall, while the third stage is arcaded. On the two principal stages the buttresses have niches for figures. The wall is surmounted by a cornice and balustraded parapet; above this appears the clerestory, and over all rises the domical roof. The Hall is capable of holding upwards of 2600 people, and is used for Academic Ceremonials, high-class Concerts, and other functions approved by the University Court.

The "M'Ewan Hall," so named by the Senatus Academicus in grateful recognition of the magnificent benefaction of the Donor, was formally opened on 3rd December 1897 with an imposing ceremonial, at which the Chancellor (the Right Hon. Arthur J. Balfour, M.P.) presided. After making a statement on behalf of the Trustees, the Donor, Mr M'Ewan, handed over the Deed of Conveyance of the Hall by the Trustees in favour of the University Court; and the Chancellor acknowledged the gift on behalf of the University. The Lord Rector (Lord Balfour of Burleigh), and the Principal (Sir William Muir), as representing the University Court and the Senatus Academicus respectively, also returned thanks, and the honorary degree of LL.D. was then conferred on Mr M'Ewan, who was subsequently presented with an Address from the Students' Representative Council. In the evening a Recital on the Grand Organ was given by Dr A. L. Peace, in presence of a large audience.

III.—REID SCHOOL OF MUSIC.

The School of Music, situated immediately to the south-east of the University New Buildings, was built in 1858, from the designs of the late David Cousin. It contains the Music Class Room, with an organ of four manuals and sixty-six stops, in a handsome carved oak case; and a Museum of interesting acoustic and antique musical instruments.

The architecture of the building is in the Italian Renaissance style of the early part of the sixteenth century.

University Library.

LIBRARY COMMITTEE.

THE Library Committee consists of not more than seven members, not being members of the Senatus, appointed by the University Court, and of such number appointed by the Senatus as shall be double the number appointed by the Court. The Committee is charged with the superintendence of the Library, and of any libraries acquired, or to be acquired, for the use of the University. The members of the Committee are appointed by the University Court and the Senatus respectively at their first meeting in the Winter Session.

Principal Sir WILLIAM MUIR,
Sir THOMAS CLARK, Bart., } *Joint Chairmen.*

Professor EGGELING,
J. BURGESS, C.I.E., LL.D., } *Joint Conveners.*

Professor Baldwin Brown; Professor Crum Brown; James Taylor Brown, Esq., LL.D.; Professor Cossar Ewart; Professor Flint; Rev. Edward F. Hoernle, M.B.; Professor Kirkpatrick; Thomas M'Kie, Esq.; Professor Mackinnon; Professor Niecks; J. Balfour Paul, Esq.; Professor Patrick; Professor Saintsbury; Professor Seth; Professor Simpson; John Anthony Trail, LL.B.

In 1580 Mr Clement Littil or Little left his books to "Edinbvrgh and Kirk of God thair to reman." This collection of about 300 volumes, chiefly theological (see list in Miscellany of the Maitland Club, vol. i., 1834), was transferred by the Town

Council to the University, and became the nucleus of the University Library.

The celebrated Poet, Drummond of Hawthornden, bequeathed his library to the University in 1627—a valuable gift, both from the eminence of the donor, and the rare specimens of early literature it embraces (see *Auctarium Bibliothecæ Edinburgenæ*, 1627).

Among noteworthy donors are Principal Adamson; Dr Robert Johnston, a physician in London; the Rev. James Nairne of Wemyss, in Fife; Dr John Stevenson, Professor of Logic and Metaphysics in the University; and Dr William Thomson, Professor of Anatomy in the University of Oxford. In 1872, Mr J. O. Halliwell, the eminent Shakespearean critic, presented his very valuable collection of works relating to Shakespeare. In 1875 a large collection of Persian and Arabic MSS. was presented by Mr J. B. Baillie of Leys; in 1879 an extensive collection of MSS. was received from the executors of David Laing, LL.D.; in 1880 the works on Economic Science collected by Professor Hodgson were presented by Mrs Hodgson; in 1882 valuable works on Sanskrit Literature were presented by the family of Dr John Muir; and in 1886 Mr Thomas Stratton bequeathed 110 works bearing on the study of Celtic. In 1889 Sir William Mackinnon, Balinakill, purchased the books of Dr Cameron of Brodick, an eminent Celtic scholar, for £600, for presentation to the University; and the same year the Library received a collection of MS. Shakespeariana from Mr Halliwell-Phillipps, and a number of books belonging to the late Professor Wilson, from Mrs Wilson. A "Lorimer Collection," in memory of the late Professor Lorimer, was presented by his son-in-law, Sir David P. Chalmers. In 1895 Professor Blackie left to the Library his collection of modern Greek books; and important additions were received from the Goodsir bequest, and from Major Sprot, as representative of the late Dr Cleghorn of Stravithie. In 1898 Sir William Fraser left a very handsome legacy to the Library, putting it for the first time since the General Reid Bequest ceased to be separately administered, in possession of funds of its own.

The Library contains about 205,000 printed volumes, and about 7500 MSS., many of which are of great value.

The University also possesses a number of valuable pictures and busts, which adorn the Library and the Senate Hall.

The Library Hall, and the suite of rooms connected with it, occupy the south side of the quadrangle (Old Buildings).

In 1895 the following Library Regulations were laid down by Ordinance (No. 64) :—

I. The Librarian shall have the ordinary management of the Library of the University, subject to the superintendence of the Library Committee appointed under the provisions of Ordinance No. 5 [St Andrews, Aberdeen, and Edinburgh, No. 1, Libraries and Museums].

II. The Librarian, and such Assistant-Librarians as the University Court, on the report of the Library Committee, may think necessary, shall be appointed by the University Court. The University Court shall also have the power of suspending or dismissing such Librarian and Assistant-Librarians.

III. All books ordered for the Library by the Library Committee shall be sent direct to the Librarian, and all books received by him shall be forthwith catalogued by him in such manner as the Library Committee may direct, and stamped with the Library stamp; and no person shall be allowed to use or borrow any book until it has been entered in the catalogue and stamped.

IV. The Librarian shall, with the approval of the Library Committee, from time to time prepare a list of such books, manuscripts, and other works as cannot, in consequence of any deed of gift or otherwise, be lent out of the Library; and the Library Committee shall from time to time make such regulations as they shall think expedient for allowing access to such works for consultation.

V. Manuscripts, rare books, works of reference, and such other works as the Library Committee shall determine, shall not be lent out of the Library, except under regulations to be made by the Library Committee and approved by the Senatus Academicus and the University Court; and, in addition to such general regulations, the Library Committee may, in each individual case of borrowing such works, impose such special conditions as they may think necessary or expedient: Provided always that every such special permission and all such additional conditions imposed by the Library Committee shall be entered in the Minute-Book of the Committee.

VI. It shall be in the power of the Librarian at any time to withdraw any work from circulation, subject to appeal to the Library Committee.

VII. It shall be in the power of the University Court, after consultation with the Senatus Academicus, and on the report of the Library Committee, to sell or exchange such works as they consider it in the best interests of the Library to dispose of.

VIII. A general inspection of the Library shall take place at such times and during such periods as the University Court, on the report of the Library Committee, shall determine, and all works whatsoever, and by whomsoever borrowed, shall be returned to the Library before the commencement of such periods, under a penalty previously fixed and publicly notified by the University Court.

IX. The Library Committee shall frame regulations to be approved by the University Court, under which the persons hereinafter mentioned may respectively

borrow or consult books. Such regulations shall prescribe, *inter alia*, (*a*) the number of books which the said persons shall be entitled to borrow; (*b*) the period for which they shall be allowed to retain them; (*c*) the penalties to be imposed in the event of their failure to return books in due time, or in the event of books being lost or injured.

The persons entitled to borrow books shall be :—

1. Members of the Senatus Academicus and University Lecturers.
2. University Assistants and Examiners.
3. The Librarian and Assistant-Librarians.
4. Matriculated Students.
5. Extra-academical Teachers, recognised by the University Court, in the town in which the University is situated.
6. Students enrolled in any Scottish University as attending the lectures of extra-academical teachers in the town in which the University is situated, and who are already entitled by Ordinance to the use of the Library.
7. Persons who have retired or who shall hereafter retire from the office of Principal or Professor.
8. Members of the University Court.
9. Members of the General Council.

Provided that no member of the University Court or of the General Council shall be entitled to obtain from the University Library books required by the Teachers or Students of the University in the prosecution of academic work and research, and that it shall be in the discretion of the Librarian, subject to appeal to the Library Committee, to decide from time to time what books are so required.

In fixing the number of books to be borrowed by the aforementioned persons respectively, due regard shall be had to the preferable claims of those engaged in teaching and studying in the University.

X. Members of the General Council shall be required, as a condition of exercising the privilege of borrowing books, to pay such subscription as the University Court shall fix from time to time.

XI. The University Court shall determine what sum, if any, shall be deposited by those entitled to borrow books.

XII. The Library Committee, with the approval of the University Court, may admit to the use of the Library, upon such conditions as to subscription and otherwise as they may require, members of the General Council of other Scottish Universities and Graduates of the University who, by reason of being under the age of twenty-one years, are not qualified to be members of the General Council.

XIII. It shall be in the power of the Library Committee from time to time to grant the use of the Library to such extent and on such conditions as they shall think expedient to persons who may not be members of the University, for purposes of literary research, and the names of those privileged readers shall be reported annually to the University Court.

XIV. So long as any Library subscription or any fine incurred remains unpaid, and so long as any person continues in possession of a book which he is not entitled to retain, the right of the defaulter to the use of the Library shall be suspended and remain in abeyance.

XV. The Library Committee shall, in an annual report to the Senatus Academicus, furnish information as to :

1. The state in which the borrowing registers are kept, and whether there is in use any finding list or other means for facilitating the recall of books.
2. The condition of the various catalogues, whether they are brought up to date or not; the amount of arrears, if any, of the cataloguing of the titles of current acquisitions; and what portions of the Library, if any, remain uncatalogued.
3. The amount of money spent in the purchase of books and periodicals respectively, and how the expenditure has been distributed among the several departments of literature and science.

XVI. At such time as shall be fixed by the Senatus Academicus the Librarian shall report to the Senatus in reference to the year then ended:

1. The particulars of every case of admission to special reading privileges.
2. The particulars of every case in which the right to the use of the Library has been suspended or is in abeyance.
3. Every case in which a book belonging to the Library has been replaced at the expense of a borrower.
4. The titles of all books belonging to the Library, known to have been lost or seriously injured, or found at the time of inspection to be amissing.
5. The titles of all books entered as missing in previous reports which have been recovered.
6. The number of accessions to the Library acquired by purchase and received in donation respectively.
7. Any other matter which the Librarian may think it of importance to bring under the notice of the Senatus Academicus, or which he may be directed by the Library Committee to report.

The Senatus Academicus shall forward the report to the University Court.

XVII. Ordinances numbered 68 and 89 of the Commissioners under the Universities (Scotland) Act, 1858, are hereby repealed, provided that the regulations therein contained shall continue to be in force in each University until new regulations have been framed by the Library Committee, and approved by the University Court under the provisions of this Ordinance.

SUPPLEMENTARY REGULATIONS UNDER ORDINANCE 64, XVII.

I. The Library is open on Mondays, Tuesdays, Wednesdays, Thursdays, and Fridays, from 10 A.M. to 4 P.M. during the Winter Session; from 10 A.M. to 3 P.M. during the summer and autumn; and on Saturdays from 10 A.M. to 1 P.M. throughout the year; with the following exceptions:—

During the Christmas Vacation and the month of August the Library is open on the above-mentioned days (exclusive of Saturdays) from 10 A.M. to 1 P.M. only.

The Library is closed on Saturdays during the Christmas Vacation and the month of August; on the Queen's Birthday, Christmas Day, New Year's Day, Good Friday, the Saturday before Easter, and the Edinburgh Spring and Autumn Holidays; and (except for the return of books) during the Annual Inspection (see Regulation IX.).

II. Members of the undermentioned classes of readers may borrow from the Library and have out at one time, respectively, the number of books specified below, but no larger number (except as provided in Regulation VII.):

Members of Senatus and University Lecturers—25 vols.

Former Principals and Professors, Members of the University Court and the Library Committee, University Assistants, University Examiners, and the Librarian—10 vols.

Members of the General Council of any Scottish University, Graduates of Edinburgh University under the age of 21, and extra-academical teachers recognized by the University, on an annual payment of 10s. 6d., or a single payment of £5—5 vols.: on an annual payment of £1, 1s., or a single payment of £10—10 vols.

Assistant-Librarians and Clerks in University Offices (being of age)—5 vols.

III. No person shall be allowed to borrow books in more than one capacity.

IV. Subject to the provision as to the return of books before the Annual Inspection (Regulation X.), every member of the classes mentioned in Regulation II. is entitled to retain a book for one month: but this period may be prolonged until the time of the Annual Inspection, if the book is not otherwise required under Regulation VI. Provided that the Librarian may recall a book at any time, if required for class purposes.

V. Every Matriculated Student and every student enrolled as attending an extra-academical teacher in Edinburgh (under Ord. No. 16, Edinburgh, No. 1, Sect. viii., Sub-sect. 5) may borrow and have out at one time three volumes, but not more,

and may retain any book for two weeks ; but this period may be prolonged, with the permission of the Librarian, if the book is not otherwise required under Regulation VI. Provided that every such student, before borrowing a book for the first time in each academical year, must exhibit his Matriculation Ticket, and one Class Ticket, and deposit £1 at the Matriculation Office ; after which his name will be enrolled in the Library Books. Provided also that the Librarian may recall a book at any time, if required for class purposes.

VI. When a borrower has had a book out for a period (as determined by Regulations IV. and V.) of one month or two weeks, as the case may be, the Librarian may recall such book, if required by another person. If the book so recalled be not returned on or before the day specified on the notice of recall, the borrower shall be liable to a fine of one shilling per volume ; and to a further fine of sixpence per volume for every subsequent day so long as the book is not returned, until the total amount of the fine is equal to the sum for which the book can be replaced. Provided that, in the case of students, only half the above-mentioned fines shall be required, until the total amount is equal to the value of the book.

VII. In exceptional cases, the Library Committee may increase the number of books allowed by Regulations II., and V., or extend the periods fixed by Regulations IV. and V. ; provided that in every such case the additional number or period be specified, and entered in the Committee's minutes, and that the Committee may attach to the permission such conditions as it may deem advisable.

VIII. No book shall be given out except to the borrower in person, or to some one having written authority from him ; nor without the presentation of a Library Ticket, or a written request, signed by the borrower : and all books borrowed shall be entered immediately, with the date of borrowing, in the ledger or ledgers kept for the purpose.

IX. A General Inspection of the Library shall take place

annually during the month of April, and shall last for one week. During this period the Library shall be closed, except for the return of books.

X. All books, except as provided for by Regulation XI., must be returned to the Library before the commencement of the General Inspection, under a penalty of one shilling for every volume not returned. Notice of each book not so returned shall be sent forthwith by the Librarian to the borrower, requiring its return before the close of the Inspection; and if the book or books so required be not returned on or before that date, the borrower shall be liable to a fine of sixpence a day for each volume so long as it is not returned, until the total amount of the fine is equal to the sum for which the book can be replaced. Provided that, in the case of students, only half the above fines shall be required, until the total amount is equal to the value of the book.

XI. In exceptional cases, the Library Committee may, before the commencement of the General Inspection, and on the written application of the borrower, give permission to keep out a book or books over one period of Inspection only, provided that the borrower sign a fresh ticket for them.

XII. All books returned to the Library, if not sent by rail or post, must be delivered, at the Library-counter, to the Librarian or one of the Assistant-Librarians; and a receipt for books so returned shall be given if required.

XIII. Unbound numbers of periodicals shall remain for consultation in the Library during the first month after publication; they may then be borrowed, but shall not be retained longer than fourteen days without the special permission of the Librarian.

XIV. Manuscripts, books, and other works contemplated under Ordinance 64, Section iv., are divided into two classes. Those in class (*a*) may be consulted with the permission of the Librarian, who shall report such permission to the Library Committee at their next meeting; those in class (*b*) may not

be consulted without the leave of the Library Committee previously obtained. Works included in either class shall be consulted only in such parts of the Library as the Librarian shall determine.

XV. Manuscripts, books, and other works contemplated under Ordinance 64, Section v., are divided into two classes, viz.: (*a*) works of reference, (*b*) manuscripts and other works. Works comprised in class (*a*) may be lent out by the Librarian from the hour of closing to the next hour of opening (except during the Annual Inspection), subject to a penalty of two shillings a day per volume if not returned. Manuscripts and other works comprised in class (*b*) may be lent out by permission of the Library Committee only, subject to such conditions as the Committee may in each case determine. Provided that, in urgent cases, such works (not being manuscripts) may be provisionally lent out by the Librarian and two members of the Library Committee, subject to the approval of the Committee at their next meeting, and to such conditions as the Committee may in each case determine.

XVI. All fines shall be collected by the Librarian, and paid over by him to the Factor of the University. A report of names and amounts shall be made annually by the Librarian to the Library Committee. No fine shall in any case be remitted, except by order of the Library Committee, on sufficient cause shown.

XVII. No books or papers not belonging to the University shall be stored within the Library Building, without the special permission of the Library Committee.

XVIII. The use of matches or open lights, in any part of the Library Building, is strictly prohibited.

XIX. No persons except the Library Staff, not being actual or former members of the Senatus, University Lecturers, members of the University Court or of the Library Committee, or persons having permission under Regulation XIV., are allowed to enter or remain in any part of the Library Building beyond

the counter, except in the company of the Librarian or an Assistant-Librarian; unless by special permission of the Library Committee, or (in urgent cases) of the Librarian and two members of the Committee, subject to the approval of the Committee at their next meeting.

XX. The Librarian shall report to the Library Committee, so soon as possible, all cases in which a book has been mutilated, disfigured by writing, or otherwise injured while in the possession

Insertion to face Page 51.

II. Reading Room, New Buildings.

Instead of the last three lines read :—It is open in September and during the week in which the Spring Holiday occurs (Saturday excepted) from 10 to 1. It is closed during August and the Christmas vacation, and on holidays. *See page* 46.

[illegible] the Books on the table; they are required to hand them to the Librarian, and to get back the counterfoils. To prevent confusion, this should be done a few minutes before the close of each hour by those about to attend classes.

Besides the books in the Reading Room, each Student may consult in the Reading Room Two Volumes daily from the General Library: Provided he has handed in slips applying for them on the previous day, before 2 P.M. To such books the same rules will apply as to those consulted from the Reading Room.

No conversation or noise is permitted in the Reading Room.

The Librarian is responsible for the management of the Reading Room. Any difficulty that may arise must be referred to him, or, if necessary, through him to the Library Committee.

Students, on first applying for books in the Reading Room, must exhibit their Matriculation Tickets.

All books taken into the Room from the General Library shall be examined and returned to their place in the General Library each day. No books shall be issued from the General Library, for use in the Reading-Room, after 3.20 in Winter or 2.30 in Summer; and all books from the General Library shall be given up in the Reading-Room at 3.45 in Winter and 2.45 in Summer.

The Reading-Room is available for either men or women Students. It is open daily, holidays excepted, during the Winter Session from 10 to 4 and from 8 to 10 P.M.; Saturdays 10 to 1; and during the Summer Session from 10 to 3; Saturdays 10 to 1.

A Special Reading-Room is set apart for women students.

II. New Buildings.

In the New Buildings is a Students' Reading-Room containing Books of Reference for those attending the Classes in the Faculty of Medicine. The Regulations as to consulting Books are similar to those in the Reading-Room in the Old Buildings. It is open daily, during Sessions, from 9 A.M. to 5 P.M.; Saturdays, 9 to 12. The hours in Vacation, and the Holidays, are the same as in the case of the General Library (see pp. 45, 46), except that on Saturdays in September it is open from 9 to 12.

THEOLOGICAL LIBRARY.

This Library, founded in 1698 for Students in Theology, contains above 10,000 volumes. The management is vested in

six Curators, chosen by ballot by the "Cives" of the Library from their own number. Students of Divinity of this or other Scottish University are admitted as Cives on paying: the former, two shillings and sixpence; the latter, five shillings, per annum. No one who, when a Student of Divinity in this University, failed to enter as a Civis, may afterwards do so until he has paid up the arrears of two shillings and sixpence for each year of his Theological Course in which he failed to pay. No Civis can be elected a Curator unless at least in the second year of his attendance at the Divinity Hall. The election takes place in the second week of December, one-third of the Curators going out annually by rotation. The Curators elect one of their own number to be Treasurer. The Curators and Treasurer report the state of the funds, &c., to the Cives, the Theological Faculty, and the Senatus. The books purchased are selected by the Curators, subject to the approval of the Faculty of Divinity. The Professor of Divinity, who is *ex officio* Honorary Librarian, annually appoints an acting Librarian. Books may not be kept out of the Library longer than two months.

SELLAR AND GOODHART CLASSICAL LIBRARY.

This Library was instituted by private subscription in October 1897, in memory of Professors Sellar and Goodhart. It is intended as a reading-room and library of reference for Students reading for Honours in Classics. It contains nearly 1000 volumes, and is managed by a Committee consisting of the Professors of Greek and Latin, the Assistants to the Professors, and five representatives elected by the Members.

Subscription for year, 6s.; for Winter Session, 5s.; for Summer Session, 3s.

HONOURS PHILOSOPHICAL LIBRARY.

This Library was instituted by private subscription in January 1897, along with libraries in connection with the ordinary classes of Logic and Moral Philosophy. It is used

both as a Lending Library and as a Library of Reference and is at present placed in a room adjoining the Moral Philosophy Class-room which is being prepared as a reading-room for Honours Students. It is managed by a Committee consisting of the Professors of Logic and Moral Philosophy, the Assistants to the Professors, and two representatives elected by the Honours Classes.

Subscription for year, 5s.; for Winter or Summer Session, 3s.

HISTORY LIBRARY.

This Library, founded by Professor Kirkpatrick in 1891, and greatly extended by a donation of £100 from Professor Tiele of Leyden, Gifford Lecturer in 1896-98, is open to Students in both the Ordinary and the Honours Classes in General and Constitutional History and Political Science. It is used mainly as a Library of Reference and a Reading-room, and is superintended by the Assistant in History.

PORTRAITS AND BUSTS IN THE SENATE HALL, LIBRARY, COURT ROOM, ANATOMICAL MUSEUM, MUSIC CLASS ROOM, AND DOME.[1]

I. PORTRAITS.

There are twenty-seven Portraits of Benefactors, Principals, Professors, and others, by Raeburn, Sir John Watson Gordon, and other Artists, in the Senate Hall, four in the Library, sixteen in the University Court Room, and one in the Music Class Room.

Portraits presented since 1890.

In Senate Hall.

James Lorimer, M.A., LL.D., Dr Jur., Professor of Public Law (1862-1890).

Joseph Black, M.D., Professor of Chemistry and Medicine (1766-1795).

Lord Playfair, Professor of Chemistry (1858-1869), by Pickersgill, R.A., presented by the present Lord Playfair.

[1] There is a separate printed Catalogue of the Portraits and Busts in the University, and of the Torrie Collection. A detailed Catalogue will also be found in the Calendar for 1890-91, p. 61, as well as in the previous Calendars.

In Court Room.

General Sir Joseph Straton, Benefactor of the University.

Portrait of the late John Wyllie, C.B., M.D., Physician General of the Madras Army, presented by General Pearse, C.B.

II. Busts.

There are forty Busts in the Upper Library Hall, two in the Anatomical Museum, and one in Room in Dome.

In order to honour and perpetuate the names of Benefactors who have founded Scholarships, Bursaries, or new Chairs in the University, the University authorities have made arrangements for placing their Busts or Portraits in the Library and University Court Room.

Regarding as Benefactors the eminent Professors who have elevated the character of the University by their writings or discoveries, the University desires to procure Portraits or Busts of James and David Gregory, Colin Maclaurin, Matthew Stewart, Dr Cullen, Dr James Gregory, Dr Alison, Dr Chalmers, Sir Chas. Bell, Lord Woodhouselee, Dr Thos. Chas. Hope, Professors Ross, Macdougall, Muirhead, Sellar, Campbell Fraser, Sir Douglas Maclagan, and Rutherford.

Busts presented since 1890.

In Library Hall.

Rt. Hon. John Inglis, D.C.L., LL.D., Lord Justice-General, Chancellor of the University (1868-1891).

John Rae, M.D., LL.D., Arctic Explorer.

James Miller, M.D., LL.D., &c., Professor of Surgery in the University (1842-64).

John Goodsir, F.R.S., Professor of Anatomy in the University (1846-1867).

David Masson, M.A., LL.D., Professor of Rhetoric and English Literature (1865-95).

In Students' Reading Room.

Thomas Carlyle, Rector of the University (1865-1868).

TORRIE FINE ART COLLECTION.

Sir James Erskine of Torrie, by a Will, dated April 1834, bequeathed to the University his Pictures, Bronzes, and Marbles, "for the purpose of laying a foundation for a GALLERY for the encouragement of the Fine Arts." The collection is at present temporarily deposited in the National Gallery until funds can be obtained for its suitable display in the College, and for carrying more fully into effect the intentions of the testator.

The Pictures, forty-five in number, include choice specimens of the works of different Masters, especially in the Flemish and Dutch Schools. The Marbles, seventeen in number, and twenty-three Bronzes, have been chosen with a correct appreciation of the merits of this department, and the whole collection reflects credit on the taste and public spirit of Sir James Erskine.

Museums.

A MUSEUM COMMITTEE, consisting of three members, not being members of the Senatus, appointed by the University Court, and of six appointed by the Senatus, is charged with the superintendence of all Museums belonging to the University, and of any collections, furniture, or apparatus, or objects acquired for the use of the University or of any class therein. The members are appointed by the University Court and Senatus respectively at their first meeting in the Winter Session of each year.

Members of Committee appointed by the University Court.
Sir James Alexander Russell, M.A., M.B., C.M., B.Sc.; Patrick Heron Watson, M.D.; John Duncan, M.D.

Appointed by the Senatus Academicus.
Professors Sir William Turner, Tait, Geikie, Fraser, Greenfield.

Of the following Museums several belong partly or wholly to the Professors of the respective subjects :—

1. NATURAL PHILOSOPHY MUSEUM. A large and very valuable collection of physical apparatus, chiefly modern.

2. MUSIC AND MUSICAL INSTRUMENTS.—A very interesting and valuable collection of acoustic and musical instruments.

3. GEOLOGICAL MUSEUM.—For class purposes, showing the characters of minerals and rocks, and the typical fossils of the different geological systems.

4. FINE ART MUSEUM.—A small collection of casts, photographs, and drawings, in the Dome above the portal, illustrating the main points in the history of classical art.

5. MUSEUM OF THE ROYAL BOTANIC GARDEN. — This Museum is open to Students.

6. PHYSIOLOGICAL MUSEUM.—A large collection of Physiological Instruments, Microscopes and Microscopical Appliances, Diagrams, and Preparations, partly belonging to the Professor.

7. PRACTICE OF PHYSIC MUSEUM.—Pathological specimens, drawings, models, diagrams, etc., the property of the Professor.

8. ANATOMICAL MUSEUM.—Founded in 1800 by Dr Monro, *secundus*, who presented his own Anatomical Collection, and that of his father, to the University, "to be used by his succes-

sors for the purpose of demonstrating and explaining to the Students the structure, physiology, and diseases of the human body." In 1859, Sir David Monro, M.D., presented a collection of anatomical preparations, formed by his father, Dr Alexander Monro, *tertius*. Numerous additions were also made by Professor Goodsir, especially in the department of Comparative Anatomy, on whose death the Senatus purchased his Private Museum, and added it to the Collection. The Museum now contains several thousand specimens in illustration of Human Anatomy, both normal and pathological, and of Comparative Anatomy.

The Conservator will gratefully receive contributions of rare and interesting specimens from Graduates and former Students. He is especially desirous of making the collection thoroughly representative of the osteology of the different Races of Men.

The Collection was transferred in 1884-5 to the University New Buildings in Teviot Place, where it is arranged in a large and handsome Hall with two galleries. It is open at certain hours to all matriculated students. The pathological collection occupies the upper gallery. The spirit-preparations in illustration of normal Human and Comparative Anatomy are arranged in the lower gallery. The osteological collection is disposed in the cases on the floor, and suspended in the centre of the Hall. In 1887 the Henderson Trustees committed to the custody of the Conservator their valuable collection of crania and casts.

Conservator of the Museum, the Professor of Anatomy; Assistant-Conservator, Mr James Simpson.

9. CHEMISTRY MUSEUM.—Professor (afterwards Sir Lyon now Lord) Playfair, on his resignation of the Chair of Chemistry, presented to the University the chemical substances he had used in illustrating his lectures. The collection has been increased by gifts from chemical manufacturers and others, and by substances prepared in the University Laboratory.

10. THE OBSTETRICAL MUSEUM, besides a few preparations left by Professor Hamilton, contains instruments, preparations, models, and diagrams, collected by Sir James Y. Simpson, and added to by the present Professor of Midwifery, to whom they belong.

11. THE MUSEUM OF NATURAL HISTORY.—The old Museum, established in 1812 in the University, contained Zoological, Geological, and Mineralogical Collections, formed chiefly by Professor Jameson, for fifty years Professor of Natural History

and Regius Keeper of the Museum. In 1854 it was transferred by the Town Council, then the Patrons of the University, to Government, and removed to the Natural History Department of the New Museum of Science and Art, where it is still accessible to Students of Natural History and Geology.

A Zoological Museum is now being formed in the University. Graduates and others interested will greatly aid in this important undertaking by presenting specimens to the Keeper—the Professor of Natural History.

12. Materia Medica Museum.—One of the most complete collections of medicinal and food substances in this country, founded by Professor Andrew Duncan. His successor, Sir Robert Christison, added many valuable specimens, mounted for the most part by himself with singular neatness. The present Professor has made extensive additions. The Museum has been greatly enriched by interesting donations from former members of the Class in all parts of the world. There is also a Students' Reading Museum, containing specimens of the medicinal substances used in this country, formed and arranged by the present Professor.

13. Surgical Museum. This collection, formed by Professor Spence, has been largely extended by the present Professor, to whom it belongs. Many additions have been made, both of pathological preparations and of plaster and gelatine casts, illustrative of Surgical Anatomy and Pathology. A complete catalogue may, on application, be consulted by practitioners of medicine.

ROYAL BOTANIC GARDEN AND ARBORETUM.

The Royal Botanic Garden, Inverleith Row, is connected with the University, in so far as the Professor of Botany delivers his Lectures in the Hall in the Garden.

The Garden is open daily. Specimens of plants for study are supplied to Students so far as practicable.

The Botanical Museum in the Garden is open to Students daily, and the University Herbarium, which is placed in the Garden, may be consulted between 10 and 1, and 2 and 5, under the direction of the Professor or the Curator.

The Botanical Laboratory in the Garden is open daily for work and original research.

Faculty of Arts.

Dean.—Professor Chrystal, LL.D.

Students who do not intend to graduate in Arts may attend any of the Classes on payment of the Matriculation and the Class Fees, without having passed any Preliminary Examination. Those who wish their Classes to count for Graduation must pass the Preliminary Examination. The Classes in the Faculty are open to Women, except a few in which provision has not yet been made for teaching them. Provision has, however, been made to admit Women to Graduation in Arts who have received the requisite instruction at the Medical College for Women, Chambers Street, Edinburgh, or from Lecturers specially recognised for that purpose, in the subjects in which classes are not open to them in the University.

The classes will be opened as follows, and will meet daily (Saturdays excepted), unless otherwise stated. They will meet for the last time before the Christmas vacation on Friday, 22nd December 1899*; will reassemble on Tuesday, 9th January* 1900*, and will be closed on Friday, 30th March* 1900*. The Annual Graduation Ceremonial in Arts, &c., will be held on Saturday, 14th April* 1900.

Programme of Classes.

WINTER SESSION, 1899-1900.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1] £	s.
I.—Department of Language and Literature.				
Junior Latin	17 Oct., 9 o'cl. & also on Mon. & Wed. 11 o'cl.	Prof. Hardie	3	3
Senior Latin[2]	17 Oct., 10 ,,	Prof. Hardie	3	3
Honours Latin	19 Oct., 12 ,,	Prof. Hardie	3	3
Junior Greek	17 Oct., 10 ,, & also on Tues., Thurs., & Fri., 11 o'cl.	Prof. Butcher	3	3
Senior Greek[2]	17 Oct., 11 o'cl.	Prof. Butcher	3	3
Honours Greek	19 Oct., 10 ,,	Prof. Butcher	3	3
Classical Archæology (Honours Course)	18 Oct., 1[3] ,,	Prof. Baldwin Brown	3	3
English	17 Oct., 4 ,,	Prof. Saintsbury	3	3
English Literature (Honours Course)[4]	18 Oct., 2 ,, 10 Jan., 2 ,,	Prof. Saintsbury	3	3
English Language (Honours Course)[4]	20 Oct., 3 ,, 10 Jan., 3 ,,	G. Gregory Smith, M.A.	3	3
French (Pass)[2]	17 Oct., 3 ,,	Charles Sarolea, Ph.D., D.Litt.	3	3
French (Honours)	18 Oct., 4 ,,	Charles Sarolea, Ph.D., D.Litt.	3	3
Italian[5]	18 Oct., 5 ,,	Charles Sarolea, Ph.D., D.Litt.	3	3

[1] Fees for second, third, and subsequent attendances, see page 64.

[2] Students who wish to take the Classes of Senior Latin, Senior Greek, French or German, as qualifying for Graduation in Arts, must have previously passed in Latin (Higher Standard), Greek (Higher Standard), French, or German respectively, either as part of their Preliminary Examination or in addition thereto.

[3] The hour may be altered to suit the class.

[4] This Course may be divided into two Half-Courses. Fee for each, £2. 2s.

[5] An Honours Course may be given by Dr Sarolea. Five Shillings University entrance fee for Non-Matriculated Students.

WINTER SESSION, 1899-1900—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1] £	s.
I.—DEPARTMENT OF LANGUAGE AND LITERATURE—*cont.*				
German (Pass)[2]	17 Oct., 4 o'cl.	Otto Schlapp, Ph.D.	3	3
German Prose Composition (*Wed.*)[3 12]	18 Oct., 4 ,,		1	1[11]
German[3 4] Lit. (*Fri.*)	20 Oct., 4 ,,		1	1[11]
German (Honours)[4]	18 Oct., 3 ,,		3	3
German Adv. Prose Comp. (*Wed.*)[3 4]	18 Oct., 3 ,,		1	1[11]
Sanskrit (Junior Class),	18 Oct., 3 ,,	Prof. Eggeling	3	3
Do. (Senior Class)[5]	18 Oct., 4 ,,		3	3
Hebrew (Junior Class)	17 Oct., 1 ,,	Prof. Kennedy	3	3
Do. (Senior Class)[5]	24 Oct., 2 ,,		3	3
Arabic[5 6] (*Mon., Wed., & Fri.*)	25 Oct., 3 ,,		3	3
Syriac[5] (*Tues. & Thurs.*)	24 Oct., 3 ,,		2	2
Celtic[5]	17 Oct., 4 ,,	Prof. Mackinnon	2	2[7]
Do. Advanced	23 Oct., 3 ,,		1	1[11]
Gaelic Class	24 Oct., 3 ,,		1	1[11]
II.—DEPARTMENT OF MENTAL PHILOSOPHY.				
Logic & Psychology.	17 Oct., 1 o'cl.	Prof. Seth Pringle Pattison	3	3
Metaphysics and Hist. of Philosophy (Honours Class)	24 Oct., 4 ,,		2	2[7]
Moral Philosophy	17 Oct., 2 ,,	Prof. James Seth.	3	3
Do. Honours Class	25 Oct., 4 ,,		2	2[7]
Political Economy[9]	17 Oct., 5 ,,	Prof. Nicholson	3	3[8]
Do. Honours Course	19 Oct., 3 ,,		3	3[8]
Education (Theory, History, & Art of)	17 Oct., 12.10 ,,	Prof. Laurie	3	3
Philosophy of Law[10] (45 *Class Meetings*)	17 Oct., 2 ,,	Prof. Sir Ludovic Grant, Bart.	2	2
Natural Theology (Gifford Lectureship)	Dates will be afterwards announced.	Prof. William James of Harvard Univ.	Free.	

[1] Fees for second, third, and subsequent attendances, see page 64.
[2] See footnote 2, page 58.
[3] *Twenty Lectures* may be taken as separate course. [4] Lectures given in German.
[5] Students who wish to take the Classes of Sanskrit, Hebrew, Arabic, Syriac, or Celtic as qualifying for the M.A. Degree, must have previously passed a Preliminary Examination in these Languages equivalent in standard to the Examinations in Latin and Greek in the Preliminary Examination.
[6] Half-Course qualifying for M.A. degree.
[7] When taken as a Graduation Course, £3, 3s.
[8] Or two Half-Courses, £2, 2s. each.
[9] Course up to Christmas qualifies in Economics for the B.Sc. in Agriculture.
[10] Half-Course.
[11] Five Shillings University entrance fee for Non-Matriculated Students.
[12] Students must be at least 18 years of age.

WINTER SESSION, 1899-1900—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees[1] £	s.
III.—DEPARTMENT OF SCIENCE.				
Junior Mathematics	17 Oct., 12 o'cl.	Prof. Chrystal	3	3
Senior Mathematics[2,3]	17 Oct., 9 ,,	Prof. Chrystal	3	3
Mathematics, Intermediate Honours	18 Oct., 11 o'cl. (*Mon., Wed., Fri.*)	Prof. Chrystal	3	3
Do. (Advanced Honours)	18 Oct., 10 o'cl. (*Mon., Wed., Fri.*)	Prof. Chrystal	3	3
Natural Philosophy[2]	17 Oct., 11 o'cl.	Prof. Tait	3	3
Do. (Advanced Honours, *Mon., Wed., Fri.*)	25 Oct., 12 ,,	Prof. Tait	3	3
Physical Laboratory	25 Oct., 10 ,,	Prof. Tait	2	2
Natural Philosophy (Intermediate Honours, *Mon., Wed., Fri.*)	18 Oct., 9 ,,	Cargill G. Knott, D.Sc.	3	3
Dynamics, Advanced Science (*Mon., Wed., Fri.*)	18 Oct., 10 ,,	Cargill G. Knott, D.Sc.	3	3
Astronomy (*Mon., Tues. Wed. Thurs.*)	18 Oct., 4 ,,	Prof. Copeland	3	3
Chemistry	17 Oct., 10 ,,	Prof. Crum Brown	4	4
Do. (Adv. Course, *Tues. Wed. Thurs.*)	9 Jan., 4 ,,	Prof. Crum Brown	2	2
Practical Chemistry	27 Nov., 11 & 2 ,,	Prof. Crum Brown	3	3
Zoology[4] (Elementary)	17 Oct., 12 ,,	Prof. Ewart	4	4

[1] For second, third, and subsequent attendances, see page 64.

[2] Students prior to attendance on the Class of Senior Mathematics or of Natural Philosophy as qualifying for Graduation in Arts, must have passed the Intermediate or Higher Standard Examination in Mathematics either as part of their Preliminary Examination or in addition thereto.

[3] The first half of the Winter Graduation Course up to Christmas qualifies as a First Half-Course in Mathematics, and the second half, from Christmas to the end of the Session, as a Second Half-Course. *Any* First Half-Course, along with *any* Second Half-Course, taken subsequently, qualifies as a full Course of Instruction for Graduation.

[4] With Practical Zoology, a full Course, but the whole Course must extend over at least 75 separate days. Any student whose attendance on the Elementary Course of Lectures and the Elementary Practical Class of Botany or Zoology does not entitle him to a full Certificate for Graduation in Arts, may make up the seventy-five attendances required on separate days, by attending twenty-five Lectures of any other Course in the Botanical or Zoological Department as the case may be, without additional fee.

WINTER SESSION, 1899-1900—*continued.*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1] £	s.
III.—DEPARTMENT OF SCIENCE—*continued.*				
Practical Zoology (Elementary).....	17 Oct., 11 o'cl.	Prof. Ewart....	2	2[2]
Advanced Zoological Laboratory.....	... ...		...	
Morphology of Vertebrates (with Lab.)	18 Oct., 2 ,,	J. Beard, D.Sc...	3	3
Botany (Advanced)	17 Oct., 11 ,,	Prof. Balfour..	2	2[3]
Practical Botany (Advanced)	18 Oct., 11 ,,		3	3[3]
Geology.....	17 Oct., 4 ,,		4	4
Practical Geol. and Min. (Graduation Half-Course) up to Christmas....	20 Oct., 2 ,,	Prof. Geikie...	2	2
IV.—DEPARTMENT OF HISTORY AND LAW.				
History (Honours Course: British Constitl. History; 1384-1563).....	17 Oct., 4 o'cl. (*Mon., Tu., Th.*)	Prof. Kirkpatrick.....	3	3
History, Genl. British	17 Oct., 12 o'cl.	Prof.[7]	3	3
History (Honours Course, Great Britain and Europe, 1815-1878).....	18 Oct., 10 ,,		3	3
Constitutional Law and History[4].....	17 Oct., 5 ,,	Prof. Kirkpatrick	4	4
Roman Law.....	17 Oct., 4 ,,	Prof. Mackintosh....	4	4[5]
History of Roman Law (44 *Class Meetings*)[6].....	... ...		2	2
Ecclesiastical History	24 Oct., 11 ,,	Prof. Taylor.....	3	3

[1] For second, third, and subsequent attendances, see page 64.
[2] Besides charge of 10s. for Laboratory Expenses.
[3] Besides Garden fee of 5s.
[4] Qualifying both for Arts Graduation (as "History," under the Arts Ordinance, Sect. VII., 2 (*b*), or as an optional or additional subject) and for Law Graduation. Two Half-Courses.
[5] Fee for Winter Session. For Winter and Summer, £5, 5s.
[6] Half-Course. [7] Vacant at date of going to press.

WINTER SESSION, 1899-1900—*continued.*

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees.[1]
IV.—DEPARTMENT OF HISTORY AND LAW—*continued.*			£ s.
Archæology and Art (History of).....	17 Oct., 3 o'cl.	Prof. Baldwin Brown.....	3 3
Classical Archæology (Honours Course, *Three days a week*)	18 Oct., 1 ,,	Prof. Baldwin Brown.....	3 3
Public International Law (45 *Class Meetings*)[2].....	9 Jan., 2 ,,	Prof. Sir Ludovic Grant, Bart.	2 2
European History, 1715-1848, Non-Graduation Course (*Mon., Wed., Fri.*)	25 Oct., 11 ,,	D. P. Heatley.....	2 2

SUMMER SESSION, 1900.

The Classes will be opened as follows, and will be closed on Friday, 20th July.

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees.[1]
I. DEPARTMENT OF LANGUAGE AND LITERATURE.			£ s. d.
Senior Latin (Graduation Half-Course)[3,4]	1 May, 9 o'cl.	James Mill, M.A.	2 2 0
Honours Latin (Graduation Half-Course)	1 May, 10 ,,	James Mill, M.A.	2 2 0
Senior Greek (Graduation Half-Course)[3,4]	1 May, 10 ,,	A. Douglas Thomson, M.A., D.Litt.	2 2 0
Honours Greek (Graduation Half-Course)	1 May, 9 ,,	A. Douglas Thomson, M.A., D.Litt.	2 2 0
English Literature (Honours Graduation Half-Course, *Mon., Wed., & Fri.*)	2 May, 12 ,,	G. Gregory Smith, M.A.	2 2 0
Sanskrit[5].....	1 May, 3 ,,	Prof. Eggeling.....	3 3 0
II. DEPARTMENT OF MENTAL PHILOSOPHY.			
Ancient Philosophy (Honours Graduation Half-Course, *Tues. and Thurs.*)..	1 May, 11 o'cl.	R. P. Hardie, M.A.	2 2 0

[1] For second, third, and subsequent attendances, see page 64.
[2] Half-course. [3] See footnote 2, page 58.
[4] The full course may be completed by attendance either for another Summer Session or for half a Winter Session. [5] Class for Indian C.S. Probationers.

SUMMER SESSION, 1900—*continued.*

Classes.	Days and Hours.	Profs. and Lecturers.	Class Fees.[1] £ s.
II. DEPARTMENT OF MENTAL PHILOSOPHY—*continued.*			
Ancient Philosophy (Honours Graduation Half-Course, *Mon., Wed., & Fri.*)	2 May, 11 o'cl.	R. P. Hardie, M.A.	2 2
Ethics (Honours Graduation Half-Course, *Mon., Wed., Fri.*)...	2 May, 12 ,,	Henry Barker, M.A.	2 2
III. DEPARTMENT OF SCIENCE.			
Senior Mathematics (First Graduation Half-Course)[2]	1 May, 11 o'cl.	Chas. Tweedie, M.A., B.Sc.	2 2
Senior Mathematics (Second Graduation Half-Course)[2].....	1 May, 12 ,,		2 2
Honours Mathematics (Graduation Half-Course)	1 May, 10 ,,		2 2
Physical Laboratory.....	1 May, 10 ,,	Prof. Tait and Assistant.	2 2
Physics (*mainly for Students of Medicine*)	1 May, 12 ,,	Prof. Tait.	3 3
Elementary Dynamics...	1 May, 9 ,,	C. G. Knott, D.Sc.	2 2
Advanced Experimental Physics.....	1 May, 10 ,,	W. Peddie, D.Sc.	2 2
Practical Chemistry	1 May, 2 ,,	Professor Crum Brown.	3 3
Chemistry (Organic).....	1 May, 1 ,,		2 2
Zoology (Elementary)[3]...	1 May, 12 ,,	Prof. Ewart	4 4
Do. (Elem. Pract.).....	1 May,[4] ,,		2 2[5]
Invertebrate Zoology.....	1 May, 2 ,,		2 2
Do. (with Lab. work)			3 3[5]
Advanced Zoology (Comp. Morphol. of Invertebrata and Adv. Lab. Course)..	1 May,[4] ,,		3 3[5]
Natural History Labor.			6 6[5]
Botany[6].....	1 May, 8 ,,	Prof. Balfour ...	4 4[7]

[1] Fees for second, third, and subsequent attendances, see page 64.
[2] See footnotes 2 and 3, page 60. [3] See footnote 4, p. 60.
[4] At hours to be arranged. [5] Besides charge of 10s. for Laboratory Expenses.
[6] With Practical Botany a full Course, but the whole Course must extend over 75 separate days. See footnote 4, page 60. [7] Besides Garden Fee of 5s.

SUMMER SESSION, 1900—*continued.*

Classes.	Days and Hours.	Profs. and Lecturers	Class Fees.[1]
III. DEPARTMENT OF SCIENCE—*continued.*			
Practical Botany..... Field Demonstrations on *Saturdays.*	1 May, 9 o'cl.	Prof. Balfour ...	£ s. 2 2[2]
Geology (Graduation Half-Course, *Mon., Wed., Fri.*)..... Field Demonstrations *on Saturdays*	2 May, 4 ,,	Prof. Geikie.....	3 3

TUTORIAL CLASSES.

Classes.	Days and Hours.	University Assistants.	Class Fees.[1]
Junior Latin (Preliminary Class).....	1 May, 12	James Mill, M.A.....	£ s. d. 2 2 0
Junior Greek (Preliminary Class).....	1 May, 11	A. Douglas Thomson, M.A., D.Litt.	2 2 0
Natural Philosophy (Advanced Honours).....	1 May, 9	William Peddie, D.Sc.	2 2 0
Formal Logic (Preliminary Class, Fifteen Lectures, *Tues. and Thurs.*).....	8 May, 12	R. P. Hardie, M.A.	1 1 0
Elementary Hebrew[3]....	1 May, 10	Andrew Tweedie, M.A.	1 11 6
Elementary Arabic.. ...	1 May, 11		2 2 0

FEES FOR SECOND, THIRD, AND SUBSEQUENT ATTENDANCES.

1. *Ordinary Graduation Classes*:—(1) Second attendances on £4, 4s. Courses, £3, 3s.; third or subsequent attendances, £1, 1s. (2) Second attendances on £3, 3s. Courses, £2, 2s.; third or subsequent attendances, £1, 1s. (3) Ordinary Celtic Class, if not taken for Graduation, £2, 2s.; second or subsequent attendances, £1, 1s.

2. Second attendances on £2, 2s. Lecture Courses (not being

[1] Fees for second, third, and subsequent attendances, see above.
[2] Besides Garden Fee of 5s.
[3] To prepare Students for entering the Junior Class in Winter Session.

Honours Half-Courses), £1, 11s. 6d.; third or subsequent attendances, £1, 1s.

3. When fee for first attendance is less than £2, 2s., no reduction for second or subsequent attendances.

4. *Honours Courses*:—(1.) *Full Honours* £3, 3s. *Courses*—Second attendances, no reduction; third or subsequent attendances, £2, 2s. (2.) *Half-Honours* £2, 2s. *Courses*—Second attendances, no reduction; third or subsequent attendances, £1, 1s.

5. No reduction for Laboratory or Practical Courses.

The following means are afforded for Practical Instruction:—

LABORATORIES.

The Physical Laboratory, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

The Royal Observatory is open to Students of Astronomy on Friday evenings from 8 P.M.

For the Chemical Laboratories, Zoological Laboratories, Royal Botanic Garden Laboratory, Geological and Petrological Laboratory, see Faculty of Science.

MUSEUMS. See pages 54-57.

MATRICULATION, &c. See pages 27-29.

Five Shillings University Entrance Fee—Classes to which applicable, pp. 29 and 30.

Courses of Lectures.[1]

1899-1900.

I.—DEPARTMENT OF LANGUAGE AND LITERATURE.

HUMANITY—(Latin).

PROFESSOR HARDIE.

Junior Class—Taught by the Assistant, under supervision of the Professor: 9 to 10, five days a week, and Mondays and Wednesdays, 11 to 12. The work of the Class consists of—

1. Readings of some Latin author, such as Virgil, Horace, Ovid, or Tibullus, Livy, Sallust, and Cicero.

2. Lectures on Roman History or Literature.

3. Exercises in Latin Prose Composition.

[1] The annual amount payable for Matriculation, Class Fees, &c., of the regular Course in Arts and Graduation Fee may be estimated at about £10. 10s.

4. Translation of passages from Latin into English, and from English into Latin "at sight."

5. Written Examinations.

Books recommended.—Bradley's Arnold's Latin Prose. Allen's Second Latin Exercise Book. Pelham's or How and Leigh's Roman History. Wilkins' Primer of Roman Literature. Wilkins' Primer of Roman Antiquities.

During the Winter Session 1899-1900 the following books will be read :—Livy, Bk. XXXVIII ; Cicero, *Philippic*, II. ; Virgil, Aeneid X.

Senior Class—10 to 11, five days a week.

This is the class which qualifies for the ordinary Degree of M.A.[1] The work of the Class consists of—

1. Readings of some Latin author, such as Virgil, Horace, Cicero, Tacitus.
2. Lectures on Roman History or Literature.
3. Weekly Exercises in Latin Prose.
4. Translation of Unseen Passages.
5. Written Examinations.
6. Latin Verse Composition (voluntary).

Books recommended.—Gildersleeve and Lodge's Latin Grammar ; Lindsay's Historical Latin Grammar ; Potts' Hints towards Latin Prose Composition ; Pelham's Outlines of Roman History : How and Leigh's History of Rome ; Capes' Early Empire : Cruttwell's History of Latin Literature ; Mackail's Latin Literature ; Companion to Latin Authors (Middleton and Mills) : Rich's Dictionary of Antiquities.

During the Winter Session 1899-1900 the following books will be read :—Plautus, *Captivi;* Virgil, *Georgics*, II. ; Horace, *Odes*, III. 1-6 ; Cicero, *De Officiis*, III.

Third (Honours) Class—12 to 1.

The Third (Honours) Latin Class meets four days a week. It is intended to assist the studies of Candidates for Scholarships and Graduation with Honours. The work consists of—

[1] See footnote 2, page 58.

1. Readings and explanations of the more difficult Latin authors, such as Tacitus, Lucretius, Plautus, Martial, &c.

2. Lectures on Roman History and Literature, chiefly in connection with the Books read in the Class.

3. Composition, and Translation of Unseen Passages.

4. Occasional Critical Papers and Essays.

5. Written Examinations on the work done in the Class.

During the Winter Session 1899-1900 the following books will be read:—Juvenal, *Satires*, VIII.-XVI.; Early Roman Poetry (ed. Merry). Tacitus, *Annals*, IV. and *Dial. De Oratoribus;* Lucan, *Pharsalia*, VII.

Summer Session, 1900.

JAMES MILL, M.A., *Lecturer.*

Senior Class—9 to 10, five days a week.

This class qualifies as a half-course for Graduation.[1] The work consists of—

1. The reading of the Latin authors prescribed for the Degree Examination in October 1900 and April 1901.

2. Lectures on Roman Literature, chiefly bearing on the authors read.

3. Lectures on Roman History, treating of the period prescribed for the Degree Examination.

4. Exercises in Latin Prose Composition.

5. Written Examinations on the work done in the Class.

6. Translation of passages from Latin into English, and from English into Latin "at sight."

The full Course may be completed by attendance either for another Summer Session or for half a Winter Session.

Third (Honours) Class—10 to 11.

This Class, in the Summer Session, qualifies as a half-course for Graduation with Honours in Classics. It meets four days a week, and is intended to assist the studies of Candidates for Scholarships, for Graduation with Honours, and for the Indian Civil Service. The work consists of:—

1. Readings and explanations of some of the more difficult

[1] See footnote 2, page 58.

Latin authors, such as Tacitus, Lucretius, Plautus, Martial, Juvenal, Lucan, &c.

2. Lectures on Roman History and Literature, chiefly in connection with the Books read in the Class.

3. Essays on questions arising out of the Lectures or Books read, and exercises in Latin Prose Composition.

4. Written Examinations on work done in the Class, and on subjects prescribed for voluntary reading.

During the Summer Session of 1900, the books read will be selected from the programmes of work for Honours Graduation in April 1901 and April 1902.

Tutorial Class.

This Junior Class is intended for students preparing for the Preliminary Examination in October, and the work will be selected with that view. Special attention is directed to Latin Prose Composition, one exercise being done with the Class daily, and two written exercises done and corrected in each week.

GREEK.

PROFESSOR BUTCHER.

Junior Class.—Taught by the Assistant, under supervision of the Professor: 10 to 11 o'clock, five days a week, and 11 to 12 on Tuesdays, Thursdays, and Fridays. The work consists of—

1. Readings of some Greek author, as Xenophon, Lucian, Plato (an easy dialogue), Homer, Euripides, or Aristophanes (selections).
2. Lectures on Greek History or Literature.
3. Exercises in Greek Prose Composition.
4. Translation of Unseen Passages.
5. Written Examinations.

Books recommended.—W. G. Rutherford's Greek Grammar, and First Greek Syntax; Goodwin's Greek Grammar; F. E. Thompson's Homeric Syntax; Jebb's Primer of Greek Literature; Fyffe's Primer of Greek History; Oman's History of

Greece, or Cox's General History of Greece, or W. Smith's Smaller History of Greece (new ed. 1897).

Senior Class—11 to 12, five days a week.

This is the class which qualifies for the ordinary Degree of M.A.[1] The work consists of—

1. Readings of some Greek author, such as Thucydides, Demosthenes, Herodotus, Plato; Homer; a play of Aeschylus, Sophocles, Euripides, or Aristophanes.

2. Lectures on Greek Literature, History, or Philosophy.

3. Greek Prose Composition, or Translation of an Unseen Passage once a week, and a Lecture on the passage when the exercises are returned.

4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

5. Greek Verse Composition (voluntary).

Books recommended.—W. G. Rutherford's Greek Grammar, and First Greek Syntax; Monro's Homeric Grammar; Goodwin's Greek Grammar; Goodwin's Greek Moods and Tenses; Sidgwick's Greek Prose Composition; Jebb's Primer of Greek Literature; Müller and Donaldson's History of Greek Literature; Jevon's History of Greek Literature, or Mahaffy's History of Greek Literature, or Murray's Ancient Greek Literature; Holm's History of Greece (Translation, Macmillan); Oman's History of Greece, or Cox's General History of Greece, or W. Smith's Smaller History of Greece (new ed. 1897); Greek Verse Composition (Sidgwick and Morris); A Manual of Comparative Philology, by Giles.

During the Winter Session 1899-1900, the following books will be read:—Demosthenes, *Leptines*; Aristophanes, *Nubes*.

Third (Honours) Class—10 to 11.

This Class meets four days a week. It is intended to assist the studies of Candidates for Scholarships and Graduation with Honours. The work consists of—

1. Readings and explanations of some of the more difficult

[1] See footnote 2, page 58.

Greek authors, such as Thucydides, Demosthenes, Plato, Aristotle, Aeschylus, Pindar, &c.

2. Lectures on Greek Literature, History, or Philosophy.

3. Greek Composition, and Translation of Unseen Passages.

4. Occasional Critical Papers and Essays.

5. Written Examinations on the work done in Class.

During the Winter Session 1899-1900 the chief work of the Class will be Aristotle, *Ethics*, VIII., IX., and Homer, *Odyssey*, I.-XII.

Summer Session, 1900.

A. DOUGLAS THOMSON, M.A., D.LITT., *Lecturer.*

Senior Class—10 to 11, five days a week.

This Class qualifies as a half-course for Graduation.[1] The work consists of—

1. The reading of the Greek authors prescribed for the Degree Examination in October 1900 and April 1901.

2. Lectures on Greek History or Literature.

3. Greek Prose Composition, and Translation of Unseen Passages.

4. Written Examinations.

The full Course may be completed by attendance either for another Summer Session or for half a Winter Session.

Third (Honours) Class—9 to 10.

This Class meets four days a week. It is intended to assist the studies of Candidates for Scholarships, for Graduation with Honours, and for the Indian Civil Service. The work consists of—

1. The reading of books selected from the programme of work for Graduation with Honours in 1901 and 1902.

2. Lectures on Greek History or Literature.

3. Greek Prose Composition, and Translation of Unseen Passages.

4. Written Examinations.

[1] See footnote 2, page 58.

This Class qualifies as a half-course for Graduation with Honours. The full Course may be completed by attendance either for another Summer Session or for half a Winter Session.

Junior (Tutorial) Class—11 to 12, five days a week.

This Class is intended for Students preparing for the Preliminary Examination in October next, and the work to be done will be selected with that view.

CLASSICAL ARCHÆOLOGY.

PROFESSOR BALDWIN BROWN.

Classical Archæology may be taken as one of the optional subjects for Honours in Classics.

An Honours Course of fifty lectures will be delivered in the Winter Session, 1899-1900, in the Fine Art Class Room, on Mondays, Wednesdays, and Thursdays, at 1 P.M.[1]

Additional Class-meetings of a tutorial character will be held as often as is found desirable, at hours to be afterwards arranged. The treatment of the subject will embrace—

1. A general survey of the field of study.

2. An examination of the most important monuments of Greek Art and selected passages from ancient authors bearing on the History of the Arts in Classical times.

3. A study of the History of Greek Sculpture from the earliest times to the age of Augustus.

The text-books will be—Overbeck's "Schriftquellen" (a collection of passages from ancient authors bearing on Classical Art); Murray's "Handbook of Greek Archæology" (London, John Murray); E. Gardner's "Handbook of Greek Sculpture" (Macmillan & Co.).

The themes will be treated from the artistic standpoint, which is now more and more insisted on by writers on this subject. A high degree of accuracy and considerable acquaintance with the chief Greek and Latin authorities will be required of Candidates

[1] The Class days and hour may be changed if others are found more convenient.

for Honours, but no previous special knowledge either of Art or of Archæology will be expected of those joining the Class. The different branches, so far as time permits, will be opened up from the beginnings, and students will be assisted in the Tutorial Classes to understand technical terms and to appreciate the artistic points which come up for discussion in the Lectures. They will also have access at suitable times to the collection of illustrations referred to in the Lectures, and to the Class Library, which contains some of the standard works on the subject.

RHETORIC AND ENGLISH LITERATURE.

PROFESSOR SAINTSBURY.

(*Ordinary Course*, 4 *to* 5, *five days a week throughout the Winter Session.*)

On Mondays, Wednesdays, and Fridays, the Lectures will be devoted, before Christmas, to a survey of Style both in Poetry and Prose from Chaucer to the Nineteenth Century; after Christmas to a similar survey of the General History and Contents of the Subject from the earliest texts to the present day. There will be Three Class Examinations during the Session, and at convenient intervals between them written Exercises will be done in Class. Two subjects for longer written Essays will also be given, one before, one after Christmas: and there will be Prizes for these Essays, distinct from the general Class Prizes. A certain number of Lectures will be specially devoted to the subject of Rhetoric, the text being De Quincey's Essay, with Campbell's *Philosophy of Rhetoric*, Whately's *Rhetoric*, Bain's *Composition and Rhetoric*, and Hodgson's *Errors in English* for illustration.

On Tuesdays and Thursdays the Lectures will take for text the books prescribed for the year, some of which will be read page by page and line by line, while others will be dealt with more summarily. The prescribed books will always include parts of Chaucer, Spenser, Shakespeare, and Milton, together with portions of other writers from the sixteenth century to the

present day. The Lectures on Style will be illustrated from Ward's *Poets* and Craik's *Prose Selections.*

(*Honours Course, 2 to 3, three days a week in the Winter Session.*)

The Professor will also give an Honours Course in two Halves of twenty-five Lectures each. The Half-Course before Christmas will be a Higher Rhetoric Course on the Theory of Prose and Verse in English, opening with a sketch of the History of Literary Criticism from Aristotle onwards. The course after Christmas will be devoted to some special subject connected with the Honours period of the year. The subject for 1900 will be "English Romances in Prose and Verse during the Fourteenth and Fifteenth Centuries": for 1901, "The English Drama from its origins to Shakespeare."

Honours Courses.

G. GREGORY SMITH, M.A., *Lecturer.*

OLD AND MIDDLE ENGLISH.

A full Honours Course of Fifty Lectures (in two parts of Twenty-five Lectures each) on Old and Middle English will be delivered in the Winter Session.

A.—HISTORY OF OLD AND MIDDLE ENGLISH.

The work of this Class (Monday, Wednesday, and Friday from 3 to 4, beginning Friday, 20th October) will consist of –

1. An Historical Outline of the Development of the English Language, in regard to Phonetics, Accidence, Syntax, and Vocabulary. Special attention will be given to the Dialects.

2. English Palæography.

Books for reference.—Sweet's *Oldest English Texts* and *History of English Sounds*; Ellis's *Early English Pronunciation*; Sievers's *Old English Grammar* ed. Cook); Kellner's *Historical Outlines of English Syntax*; Skeat's *Principles of English Etymology* (First and Second Series); Oliphant's *Old and Middle English*; Murray's *Dialect of the Southern Counties*

of Scotland (Introduction); Skeat's *Facsimiles of Old English Manuscripts*; Maunde Thompson's *Greek and Latin Palæography* (chaps. xvii.-xix.).

B.—Old and Middle English Texts.

The work of this Class (Monday, Wednesday, and Friday from 3 to 4, beginning Wednesday, 10th January) will consist of (*a*) Readings in Old and Middle English, including some of the texts prescribed for the Examination for the Honours Degree, and (*b*) Translation of Unseen Passages.

Summer Session, 1900.

English Literature.

An Honours Half-Course of Twenty-five Lectures on the Elizabethan Novels and Pamphlets.

The Class will meet on Monday, Wednesday, and Friday from 12 to 1.

FRENCH LANGUAGE AND LITERATURE AND ROMANCE PHILOLOGY.

CHARLES SAROLEA, PH.D., LITT.D., *Lecturer.*

Ordinary Graduation Class 3 to 4, five times a week.

This class qualifies for the Ordinary Degree of M.A.[1] The work consists of—

1. Readings of some French author, such as Rousseau, Voltaire, Chateaubriand, Victor Hugo.
2. Lectures on French Literature or History.
3. French Prose Composition, or Translation of an unseen passage once a week, and a lecture on the passage when the exercises are returned.
4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

[1] See footnote 2, page 58.

5. Lectures on the Philology and Historical Development of the French language.

Books to be read during the Winter Session 1899-1900 :— Victor Hugo, *Extraits;* Taine, *Extraits;* Lanson, *Littérature;* Pascal, *Pensées;* Faguet, 18e *Siècle; Extraits des Historiens français* (Hachette); The Lecturer's *Essais;* Montaigne, *Essais;* Saint-Victor, *Hommes et Dieux;* Rambaud, *Civilisation contemporaine.*

Honours Class—4 to 5.

The Honours French Class meets four days a week. It is intended to assist the studies of Candidates for Scholarships and Graduation with Honours. The work consists of

1. Readings and explanations of Old French Texts, and of some of the more difficult Modern French authors.

2. Lectures on French Literature or History, and on Romance Philology.

3. French Composition and Translation of unseen passages.

4. Occasional critical papers and essays.

5. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

Books to be read during the Session 1899-1900 : V. Hugo, *Shakespeare; Chanson de Roland;* Michelet, *Révolution;* Taine, *Extraits;* Faguet, *Politiques et Moralistes; Théâtre de* Molière, Racine, Corneille : Lanson, *Littérature française;* Montaigne, *Essais;* Rambaud, *Civilisation contemporaine.*

ITALIAN LANGUAGE AND LITERATURE AND ITALIAN PHILOLOGY.

Course of Fifty Lectures on the Honours Standard.

CHARLES SAROLEA, PH.D., LITT.D., *Lecturer.*

This Class meets three days a week. The work consists of

1. Readings and explanations of Italian Classics of the 14th and 16th century (with special regard to Dante), and of some of the more difficult modern Italian authors.

2. Lectures on Italian Literature and History, and on Italian Philology.

3. Occasional critical Papers and Essays.

4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

Books to be read during the Session 1899-1900:—Dante, "Divina Commedia," "De Monarchia"; Manzoni, "I promessi Sposi"; Leopardi, Prose; D'Ancona, "Manuale della Litteratura italiana."

Students who desire to attend this Course are requested to send their names to Dr Sarolea, University, before 1st October.

GERMAN LANGUAGE AND LITERATURE AND TEUTONIC PHILOLOGY.

OTTO SCHLAPP, PH.D., *Lecturer.*

Ordinary Graduation Class—4 to 5, five times a week.

This class qualifies for the Ordinary Degree of M.A.[1] The work consists of—

1. Readings of some Middle High German and Sixteenth Century Texts, and of such modern German authors as Winckelmann, Klopstock, Lessing, Herder, Goethe, Schiller, Jean Paul F. Richter, Heine, Uhland, Freytag, Riehl, and Storm.

2. Lectures on German Literature or History.

These lectures, the subject of which will be announced in due time, will be delivered *in German* on Fridays, and may be taken as a separate course on payment of a Class Fee of One Guinea, and in the case of non-matriculated students of an additional Five Shillings University Entrance Fee.

3. German Prose Composition, or translation of an unseen passage, or a critical paper or German essay at least once a week, and a lecture on the papers when returned.

Twenty Class Meetings (on Wednesdays) will be devoted to German Prose Composition, and may be taken as a *separate course* on payment of a Class Fee of One Guinea, and in the

[1] See footnote 2, page 58.

case of non-matriculated students, of an additional Five Shillings University Entrance Fee.[1]

4. Written Examinations on the work done in the Class, and on subjects prescribed for voluntary reading.

5. Lectures on the Philology and Historical Development of the German Language.

Books recommended. Weisse, *German Grammar;* Vietor, *German Pronunciation;* Duden, *Etymologie der Neuhochdeutschen Sprache;* Behagel, *Die Deutsche Sprache;* O. Weise, *Unsere Muttersprache:* Koch, *Geschichte der Deutschen Litteratur* (Göschen); Roquette, *Geschichte der Deutschen Dichtung;* W. Wackernagel (ed. E. Martin), *Geschichte der Deutschen Litteratur;* D. Müller, *Leitfaden zur Geschichte des deutschen Volkes.*

During the Winter Session 1899-1900 the following texts will be read or interpreted: Hartmann; Brandt; Volkslied; Schiller's *Tell*, *Gedichte*, *Briefwechsel;* Goethe's *Hermann u. D.*

Honours Class—3 to 4.

The Honours German Class meets four days a week. It is intended to assist Candidates for Scholarships and Graduation with Honours. The work of this Class is carried on in *German*, and consists of—

1. Readings and explanations of Gothic, Old, Middle, and Early Modern High or Low German Texts, and of some of the more difficult modern authors.

2. Lectures on German Literature or History.

3. German Composition, Translation of unseen passages, occasional critical papers and German essays, and a lecture on the papers when returned.

Twenty Class meetings (on Wednesdays) will be devoted to advanced German Prose Composition, and may be taken as a *separate course* on payment of a Class Fee of One Guinea, and in the case of non-matriculated students of an additional Five Shillings University Entrance Fee.

[1] Non-matriculated students taking this class must be at least eighteen years of age.

4. Written Examinations on the work done in Class, and on subjects prescribed for voluntary reading.

5. Lectures on the Philology and History of the German Language.

Books recommended. In addition to those mentioned for Ordinary Graduation Class: Brandt, *German Grammar;* D. Sanders, *Deutscher Wortschatz;* F. Kluge, *Etymologisches Worterbuch der deutschen Sprache;* F. Blatz, *Neuhochdeutsche Grammatik;* Victor Henry, *Comparative Grammar of English and German:* Hermann Paul, *Mittelhochdeutsche Grammatik:* W. Scherer, *Geschichte der deutschen Litteratur;* Jul. Schmidt, *Geschichte der deutschen Litteratur von Leibniz bis auf unsere Zeit.*

During the Session 1899-1900 the following texts will be interpreted:—*Althochdeutsche Litteratur;* Hartmann von Aue: Reineke, Sachs, Herder, Schiller, *Anmut und Würde*, v. Stein, Reuter.

SANSKRIT AND COMPARATIVE PHILOLOGY.

PROFESSOR EGGELING.

A.—Sanskrit Language and Literature.

1. *Junior Class.*—Grammar and Exercises. Easy Texts (from Lanman's Reader). Easy translations from English into Sanskrit.

2. *Senior Class.*—Repetition of Grammar. Translations from English into Sanskrit. Texts, such as the Hitopadeśa, Kālidāsa's Raghuvanśa or Śakuntalā; Mricchakatikā; Manu's Institutes of Law; selected Hymns of the Rigveda (Lanman's Reader).

The Senior Class will be the Graduating Class in Sanskrit for the Ordinary M.A.; but those who attend with a view to Graduation must previously have passed an examination under Sect. IV., subs. 3 of the Ordinance, which will include plain passages for translation from and into Sanskrit, and grammatical questions.

Those who propose, in a subsequent session, to take up Sanskrit as a graduation subject, may attend the Junior Class during the Session 1899-1900.

B.—Comparative Philology.

During the Session 1899-1900, the Professor will be prepared to deliver a course of Fifty Lectures on the Principles of Indo-European Philology and the history of Linguistic Studies, provided a sufficient number of Students give in their names.

HEBREW AND SEMITIC LANGUAGES.

PROFESSOR KENNEDY.

See Courses under Faculty of Divinity.

Arts Students are strongly advised to begin their study of Hebrew and Arabic by taking the Summer Tutorial Classes.

The Class of Senior Arabic, which meets three times a week, has been recognised by the University Court as a half-course qualifying for Graduation in Arts. It will meet in two successive (instead of in alternate) Sessions, when required, to suit the convenience of intending Graduates.

CELTIC.

PROFESSOR MACKINNON.

The Course for 1899-1900 will be arranged as follows :—

1. *Lectures.*—During the Session a course of fifteen to twenty lectures will be delivered on The History and Literature of the Scottish Highlands (1560 to present day), and a similar course on Gaelic Grammar and Syntax.

2. *Reading and Exposition.*—(1) Scottish Gaelic : Extracts for Reading, Part II.; Stewart's Grammar. (2) Irish Gaelic : Keating's Three Shafts of Death ; O'Donovan's Grammar. (3) Old Gaelic : Extracts for Reading, Part II. ; Windisch's Grammar and Irische Texte.

3. *Translations from English into Modern and Old Gaelic.*

Any student who attends this Class with a view to Graduation in Arts must previously have passed an examination (under Sect. IV., subs. 3 of the Ordinance), which will be in Scottish Gaelic, or Irish Gaelic, or Welsh ; and will include translations from and into English, with grammatical, literary, and easy philological questions.

The fee for a Student who attends with a view to graduation is £3, 3s.

An Advanced Class will meet in the Winter Session, 1899-1900, on Monday and Friday, at 3 P.M. The Class will read Old Gaelic Texts from print and manuscript. Fee, £1, 1s.

A Gaelic Class for Junior students will meet in the Winter Session 1899-1900, Tuesday, Wednesday, and Thursday, at 3 P.M. Students will read Modern Scottish and Irish Gaelic, and commence the study of Old Gaelic. Grammar and Exercises.—Fee for this class, £1, 1s.

Text-Books.—Extracts for Reading, Parts I. and II.; Stewart's and Joyce's Grammar; Windisch's Grammar.

II.—DEPARTMENT OF MENTAL PHILOSOPHY.

LOGIC AND METAPHYSICS.

PROFESSOR SETH PRINGLE PATTISON.

Logic and Psychology—Junior Class—1 to 2.

The course in this class falls into three parts :—

(1) Elements of Logic, Deductive and Inductive; (2) Outline of the main facts of Empirical Psychology, dealing more particularly with the facts and processes of cognition; (3) Introduction to the questions of philosophy, with reference to the history of Greek philosophy and of modern philosophy in England.

1. In the Logical part of the course the text-book used is Jevons's "Elementary Lessons in Logic."

It is extremely desirable that students, before entering the class, should have familiarised themselves with the main doctrines of Formal Logic: and a tutorial class (Fifteen Lectures) for those who desire it is held in summer by Mr Hardie, Assistant to the Professor. An examination is held about a fortnight after the opening of the Winter Session to test the knowledge of the class. It embraces the first seventeen Lessons in Jevons with the exception of Lessons 4, 6, 7, 10, 11, and 13; for Lesson 10 students should substitute a printed

chapter which they may obtain on application at the Matriculation Office. For those who fail to reach a reasonable standard in this examination, separate tutorial meetings will be held during the early part of the session.

The lectures in Logic will assume this elementary knowledge to have been acquired, and will be devoted mainly to the principles of the subject. The chief theories of the Judgment and the ultimate nature of Inference will be discussed and references given to more advanced text-books.

2. In the Psychological division of the course no text-book is prescribed, but frequent reference is made to the leading works on the subject, and a Handbook such as Stout's "Manual," James's "Text-book," Sully's "Outlines," Höffding's "Outlines," or Baldwin's "Elements," may be usefully read in connection with the lectures.

The lectures cover the chief topics of the Psychology of Cognition, with the Psychology of the Feelings and the Will in outline.

3. The Philosophical lectures give a sketch of the development of speculative thought in Ancient Greece and then pass to the beginnings of Modern Philosophy. Bacon, Descartes, Locke, Berkeley, and Hume are studied in succession.

Professor Fraser's "Selections from Berkeley" and certain chapters of Locke's "Essay" and Hume's "Enquiry" are used in connection with the lectures as an introduction to the problems of modern philosophy.

Metaphysics and History of Philosophy—Honours Class—4 to 5.

This Class, an Honours Course of Fifty Lectures, is intended for those who have attended the ordinary course, or have otherwise some acquaintance with philosophy. The lectures deal in a more advanced way with the chief systems of modern philosophy, special attention being devoted to Spinoza and Kant. Guidance is also given in the study of Advanced Psychology, and some of the Lectures deal with the problems of Advanced Logic.

Lectures on Greek Philosophy are delivered as a part of this Course by Mr Hardie, Assistant to the Professor and Lecturer in Logic and Metaphysics.

The Class meets on Tuesday and Thursday throughout the Session, and during part of the Session at a separate hour for the Lectures on Greek Philosophy.

Summer Session, 1900.

R. P. HARDIE, M.A., *Lecturer.*

Honours Courses in Ancient Philosophy.

Each of the following will constitute a Half-Course qualifying for Honours in Mental Philosophy and in Classics :—

A.—Subject, Plato chiefly, but other subjects will be treated, in accordance with the requirements of the Class.

Books.—Two at least of the following :—Plato, *Republic*, *Theaetetus*, *Philebus;* Ritter and Preller, *Historia Philosophiae Graecae*, Sections 1-173.

B.—Subject, Aristotle.

Books.—Two at least of the following :—Aristotle, *De Anima* and *Nicom. Ethics*, especially Bks. I.-IV. and X.; Trendelenburg, *Elementa Logices Aristoteleæ.*

Tutorial Class in Elementary Logic.

This Course of Fifteen Lectures on Logic is intended to prepare Students for the Ordinary Class of Logic and Metaphysics.

MORAL PHILOSOPHY.

PROFESSOR JAMES SETH.

Ordinary Class—2 to 3.

After an introductory statement of the problem and method of Ethics, a sketch of the development of moral ideals in primitive, ancient, and modern times will be given, with the object of awakening reflection upon the central question of ethical science—the nature of the Moral Ideal. The investigation of this question will occupy the larger part of the course, and will be based upon a critical study of the chief systems of Ethics, in the light of their historical development. The application of the general principle thus reached to the re-

gulation of the moral life, individual and social, will next be considered, special attention being given to the ethical basis and functions of the Family and the State, and to some of the more concrete aspects of current morality. The course will close with a discussion of the metaphysical implications of ethical theory, more particularly the question of Freedom.

The Course will consist of lectures, discussions, written examinations and essays. The text-book will be the Professor's *Ethical Principles*, and a special study will be made of Butler's *Sermons on Human Nature*, Mill's *Utilitarianism*, and Spencer's *Data of Ethics*. Sidgwick's *History of Ethics* should also be studied in connection with the lectures. A short course of lectures on portions of Aristotle's *Ethics* and on Kant's *Fundamental Principles of the Metaphysic of Morals* will be given by the Assistant to the Professor.

Honours Class—4 to 5.

This Course of Fifty Lectures is intended for those who have attended the Ordinary Class, or have otherwise obtained a general knowledge of Moral Philosophy. The lectures will be devoted to the History of Ethics, ancient and modern, with special reference to the development of the several theories, in their relations to one another and to the general influences, metaphysical and social, of their time. Students will be expected to read portions at least of the original treatises referred to in the course. Selby-Bigge's *British Moralists* will be found specially useful in the study of the modern period.

Summer Session, 1900.

Honours Course in Ethics.

HENRY BARKER, M.A., *Lecturer.*

This Class (a half-course qualifying for Honours in Philosophy) will meet at twelve on Mondays, Wednesdays, and Fridays, beginning 2nd May. The course is intended mainly for students who propose to take Honours Classes during the following winter. Subject : Recent English Ethics, with special reference to Green and Sidgwick.

COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

PROFESSOR NICHOLSON.

The Course, embracing two Half-Courses of Fifty Lectures each, qualifies for Graduation in Arts and for Graduation in Law (optional with Conveyancing).

In connection with the Lectures students are expected to read the portions indicated of Mill's Political Economy, Bks. I. to III.; Marshall's Economics of Industry; Smith's Wealth of Nations, Bk. IV.; and the Professor's "Treatise on Money," 4th edit. For fuller treatment of the subjects of the Lectures students may consult the Professor's "Principles of Political Economy," Bks. I. to III.

1. SCOPE AND METHOD OF POLITICAL ECONOMY.—Analysis of Fundamental Conceptions, Wealth, Utility, Total and Marginal Utility, Capital, Labour, &c.

2. PRODUCTION OF WEALTH. Meaning of Production—Agents of Production—Land Labour and Capital—Efficiency of Labour—Division of Labour—Organisation of Industry—Production on a Large and Small Scale—Accumulation of Capital—Growth of Population—Limits to the Production of National Wealth.

3. DISTRIBUTION OF WEALTH.—Private Property—Socialism—Land Tenures—Wages—Profits—Rents—Combinations of Labour and Capital.

4. EXCHANGE. Theory of Value Demand and Supply—Cost of Production—Money—Banking Credit—Rate of Interest—Commercial Crises—Foreign Trade—Free Trade—Foreign Exchanges.

5. PRINCIPLES OF GOVERNMENTAL CONTROL AND TAXATION.—An Elementary Treatment of the Leading Principles.

Four written Examinations and Two Essays. Essays Voluntary.

Honours Class—(Fifty Lectures, 3 to 4, Mondays, Tuesdays, Thursdays).

Half of the Course will be mainly devoted to British Economic History, and Half to more difficult Economic Theories with special treatment of the Economic Functions of Government and the Principles of Public Finance. The two Half-Courses may be taken separately.

As preparatory to the Course, students are recommended to read — Cunningham's "Growth of English Industry and Commerce," Bastable's "Public Finance," and the Professor's "Principles of Political Economy."

THEORY, ART, AND HISTORY OF EDUCATION.

PROFESSOR S. S. LAURIE.

I. Theory, or Science, of Education.

A.—The End and Materials of Education.

The Possibilities and Limits of Education. The End of Education. The relation of the School to this End. The Educative Process generally, whereby the End is attained.

Materials or Subjects of Instruction conducive to the attainment of the End, and the carrying out of the Process. Definition of subjects of instruction in their school sense. Relative value of subjects for instruction and discipline respectively. Practicability of the School Curriculum. Distinction of Real and Formal, Humanistic and Naturalistic subjects.

Material conditions of the life and growth of Mind, i.e. *Physiology and its Educational Lessons.*

B.—Science of Education, *i.e.*

Applied Psychology and Ethics.—1. The Psychology of Intelligence in its educational relations fully treated. Periods of Mental Growth. Methodology or the Principles and Rules of the Art of Instruction which the Science yields.

2. Psychology of the Ethical Nature of Man in its educational relations. The Real of Morality (Instruction and Training) : the Formal in Morality (Discipline to Duty).

II. Art of Education or Application of Principles and Rules.

A.—*Intellectual. Rules of the Art*, i.e. *Method in Intellectual Instruction, Training, and Discipline.*—Analytic exposition of the Rules, showing their derivation from the Science of education. Application of the Rules to teaching of—

(1) Real-Naturalistic subjects, *e.g.* Object-lessons, Elementary Science, Geography, &c.

(2) Real-Humanistic subjects, *e.g.* Language, Literature, Economics, History, &c.

(3) Formal subjects, *e.g.* Arithmetic, Geometry, Grammar, Foreign Languages.

B.—*Ethical. Rules of the Art*, i.e. *Method in Moral Training and Discipline.* Motives. The Authority of the Teacher. The meaning of Authority. The nature and conditions of its exercise. Punishments. Rewards, and school discipline generally.

Organisation of a School. Organisation of a State-system. Ideas governing Primary, Secondary, and University Instruction respectively. The Manual and the Technical in Instruction. School appliances. Manipulation of a Class. The Teacher.

D.—History of Education and of Theories.[1]

Pre-Christian Education — 1. Education in Ancient Egypt. 2. Education among the Semitic Races. 3. Education of the Hindu Races. 4. The Education of the Ancient Persians. 5. Education among the Hellenic Races. The educational views of Plato and Aristotle. 6. Education among the Romans. 7. Detailed analysis and exposition of the Institutions of Quintilian. 8. Plutarch.

[1] In 1893-1900 the Lectures will be confined to the period from 1350 to 1700 A.D. The Renaissance and the Modern Period.

Christian Education—1. The decay of the Romano-Hellenic, and the rise of Christian, Education. 2. The Cathedral and Monastery Schools. 3. The Rise of Universities.

The Renaissance -1. Humanism as represented by Vittorino da Fettre, Elyot, Rabelais and Montaigne, Erasmus, Colet, Luther, Melancthon, John Sturm, Roger Ascham. Exposition of "The Scholemaster."

The Modern Movement — 1. Lord Bacon. 2. Ratichius. 3. Comenius. 4. Milton. 5. Analysis and exposition of John Locke's "Thoughts on Education," and the "Conduct of the Human Understanding." 6. Rousseau. 7. Pestalozzi, Jacotot, Fröbel, Jean Paul Richter, Diesterweg, Dr Arnold. 8. Dr Andrew Bell and Joseph Lancaster. 9. Herbert Spencer and contemporary Realism.

Note.—The books to be thoroughly studied during the Session, apart from the Lectures, are Comenius' *Didactic*, and the Professor's book on "Language and Linguistic Method," *second edition.* The "Institutes of Education" must also be in the hands of the student. *Four written Examinations will be held during the Session, and Three Essays on educational principles or method called for.*

PRACTICE IN TEACHING.—Arrangements are made at the Training Colleges for securing training in the *Practice of Teaching* to the extent of the requirements of the University Schoolmaster's Diploma now recognised by the Education Department. Fee for this, £1, 1s. The High School and the Heriot Secondary School are also open. Facilities are also given for visiting some of the principal schools, and acquiring a knowledge of their organization.

PHILOSOPHY OF LAW

PROFESSOR SIR LUDOVIC GRANT, BART.

This Course of Forty Lectures, commencing on Tuesday, 17th October 1899, at 2, will qualify as a half-course for graduation.

Scope of the Science defined. The State, its Functions and

Legal Institutions, Marriage, Family, Property, Succession, Contract, Punishment, &c., examined. The Province of Jurisprudence determined. Examination of the Sources of Positive Law. Classification of Rights.

Books of reference.—Ritchie, Natural Rights; Green, Principles of Political Obligation; Lorimer, Institutes of Law; Ahrens, Cour de Droit Naturel; Lerminier, Philosophie de Droit; Bluntschli, The Theory of the State; The Student's Austin; Holland, Jurisprudence; Sir Henry Maine's Works; Pollock, First Book of Jurisprudence. *Vide under Faculty of Law.*

GIFFORD LECTURES ON NATURAL THEOLOGY.

Lecturer—PROFESSOR WILLIAM JAMES, OF HARVARD UNIVERSITY.

These Lectures were endowed by the late Adam Gifford, Senator of the College of Justice, "for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term." . . . "The lecturers appointed shall be subjected to no test of any kind, and shall not be required to take any oath, or to emit or subscribe any declaration of belief, or to make any promise of any kind; they may be of any denomination whatever, or of no denomination at all; they may be of any religion or way of thinking, or, as is sometimes said, they may be of no religion; or they may be so-called sceptics or agnostics or free-thinkers;—provided only that the 'patrons' will use diligence to secure that they be able reverent men, true thinkers, sincere lovers of and earnest inquirers after truth. I wish the lecturers to treat their subjects as a strictly natural science, the greatest of all possible sciences, indeed, in one sense, the only science, that of Infinite Being, without reference to or reliance upon any supposed special exceptional or so-called miraculous revelation. The lecturers shall be under no restraint whatever in their treatment of their theme. The lectures shall be public and popular, that is, open not only to

students of the Universities, but to the whole community, without matriculation."

The arrangements for 1899-1900 *will be announced before the opening of the Session.*

III.—DEPARTMENT OF SCIENCE.

MATHEMATICS.

PROFESSOR CHRYSTAL.

Junior Class Taught by the Assistant, under supervision of the Professor. 12 to 1.

Plane Geometry equivalent to Euclid, Books i., ii., iii., iv., and vi. (*Syllabus of Plane Geometry*, prepared by the Association for the Improvement of Geometrical Teaching forms the text of the lectures); Solid Geometry, equivalent to Euclid, Book xi.; Modern Geometry; and Elementary Algebra.

Senior Class—9 to 10.

This is the qualifying class for the Ordinary Degree of M.A. and for the First Science Examination.[1]

Algebra, including the elements of the Theory of Equations, and of Determinants, the Theory of Limits and the Elements of Curve Tracing; Plane Trigonometry; Conic Sections, treated geometrically and analytically; Modern Geometry.

Intermediate Honours Class - Monday, Wednesday, Friday, 11 to 12.

This course will suit Engineers and other Science Students who do not wish to make a specialty of Pure Mathematics.

Elementary parts of the Differential and Integral Calculus, and of the Calculus of Finite Differences. Analytical Geometry, Plane, and Elementary Solid. It is assumed that the Student has a knowledge of the Theory of Equations, and of the elements of the Theory of Determinants before he joins this Class.

[1] See footnote 2, page 60.

Advanced Honours Class—Monday, Wednesday, Friday, 10 to 11.

The subjects of this are the higher parts of the Differential and Integral Calculus; Differential Equations; Definite Integrals with special reference to Fourier's Theorem; Functions of Laplace and Bessel; Higher Plane Curves; Analytical Geometry of Three Dimensions.

Additional lectures on Quaternions, Projective Geometry, and other special subjects are given occasionally.

Tutorial Classes.—Occasional lectures are also given by the Class Assistant. The time is devoted to the repetition of parts of the class lectures and to the working of examples.

Home Exercises are prescribed weekly in all the classes.

Written Examinations are held during the Session. The class honours are determined solely by these examinations.

Text-Books.—As a rule *special* text-books are not prescribed; but the student is recommended to select from the following:—

Geometry.—Wilson's Elementary Geometry, or the Text-Books of the Society for the Improvement of Geometrical Teaching, and one or more of the following, for the sake of the exercises they contain:—Mackay's, Todhunter's, Nixons', or Casey's edition of Euclid's Elements, and Casey's Sequel to Euclid.[1]

Algebra.—Chrystal, or Todhunter, Gross, Chambers's Mathematical Tables.

Solid Geometry and Conic Sections.—Taylor (smaller work) or Taylor[1] (larger work).

Trigonometry.—Todhunter, Walmsley, or Lock (M'Lelland and Preston[1] for Spherical Trigonometry).

Analytical Geometry.—Smith's Analytical Conic Sections; and Dyer's Exercises in Analytical Geometry. Students intending to take the Third Class are recommended to get Salmon's Conic Sections, Salmon's Higher Plane Curves,[1] and Salmon's

[1] Recommended to those only who make Mathematics a specialty.

Geometry of Three Dimensions,[1] or, instead of the last, Smith's Solid Geometry.

Projective Geometry.—Cremona's Elements of Projective Geometry translated by Leudesdorf, or Henrici's Article on *Geometry*, "Encyclopædia Britannica" (9th edition).

Higher Algebra and Theory of Equations, etc.—Burnside and Panton's, or Todhunter's Theory of Equations; Thomson's Introduction to Determinants, and Muir[1] or Scott[1]; and Salmon's Higher Algebra for those who mean to read for Mathematical Honours.

Differential and Integral Calculus.—Williamson's Treatises, Forsyth's Differential Equations,[1] Frost's Curve Tracing, Boole's Finite Differences.[1]

Summer Session, 1900.

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

1. *Senior Mathematics (First Graduation Half-Course* — 11 to 12.

This Class qualifies for Graduation in Arts and Science as a First Half-Course[2,3] in Mathematics. The work consists of Algebra and Plane Trigonometry, corresponding to the First Half of the Winter Graduation Course.

2. *Senior Mathematics (Second Graduation Half-Course* — 12 to 1.

This Class qualifies for Graduation as a Second Half-Course[2,3] if taken *after any* First Half-Course in Mathematics. Suitable also for Students reading for the more advanced part of the Winter Graduation Course. The work consists of Algebra and the elementary treatment of the Conic Sections, Geometrical and Analytical.

[1] Recommended to those only who make Mathematics a speciality.

[2] The first half of the Winter Graduation Course up to Christmas qualifies as a First Half-Course in Mathematics, and the second half of the Winter Course from Christmas to the end of the Session as a Second Half-Course. *Any* First Half-Course, along with *any* Second Half-Course, taken subsequently, qualifies as a full Course of Instruction for Graduation.

[3] See footnote 2, page 60.

In each Class weekly exercises are prescribed, and two written examinations are held.

3. *Honours Mathematics (Graduation Half-Course)* 10 to 11.

This Class qualifies as a First Half-Course for Graduation in Arts and Science, with Honours in Mathematics and Natural Philosophy, and will also, so far as is expedient, be adapted for Engineering Students.

The course will aim at a working acquaintance with the more elementary parts of Determinants and the Theory of Equations (not treated in the Winter Advanced Courses), Differential and Integral Calculus, Finite Differences, and Analytical Geometry.

Tutorial Classes.

The above Classes also serve for Tutorial Classes.

Weekly exercises are prescribed on the work of each class.

For text-books, see page 90.

NATURAL PHILOSOPHY.

PROFESSOR TAIT AND DR KNOTT.

Ordinary Class.—(Qualifying for M.A. and First Science Examination.) [1]

The subjects embraced in this Course are :—

1. Properties of Matter (including Inertia, Gravitation, Molecular Forces, &c.
2. Abstract Dynamics (including Kinematics, Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with their applications.
3. Sound, and Wave-propagation in general.
4. Heat (including Thermo-Dynamics).
5. Light (Geometrical and Physical Optics, and Radiation generally).
6. Electricity.
7. Conservation of Energy.
8. Astronomy (Descriptive and Physical).
9. Meteorology.

[1] See footnote 2, page 60.

Properties of Matter, Abstract Dynamics, and Conservation of Energy, together with two or three others of the above divisions of the subject, are treated in detail every Session, the remainder being discussed in a more superficial manner, as it is impossible to enter at length into all in a single Session.

It is intended that in 1899-1900, besides Sections 1, 2, and 7, Sections 4 and 6 shall form the more detailed part of the Course.

The Class is examined at intervals upon the subjects treated in the Lectures; and a prize is given for the best answering. In these examinations, which form an essential part of the class-work, no Mathematics are requisite, except the most elementary portions of Arithmetic, Algebra, and Geometry.

In January and March there are special Examinations on prescribed subjects, applying mainly to students competing for Class Prizes; and, on these two occasions only, the Class is divided into two parts—the division depending mainly upon the students' proficiency in Mathematics. In the Lower Division, the elements of Algebra and Geometry alone are required; in the Higher Division, Algebra, Geometry, and the Geometry of the Conic Sections are necessary. The Prizes in each Division are determined by adding the marks obtained in the two sets of Examinations above described. No student who has obtained a Prize in either Division can compete, in a subsequent Session, for a Prize in the same or in a lower Division.

The Text-Book for the Dynamical part of the Course will be Thomson and Tait's "Elements of Natural Philosophy" (Pitt Press, Cambridge). Of this, however, only the more elementary portions will be required for the Lower Division. For the remainder of the subject the student may consult some of the following books: — Clerk-Maxwell's "Matter and Motion," Jenkin's "Electricity," Balfour Stewart's "Lessons in Physics," Knott's "Physics," Tait's "Properties of Matter," "Heat," and "Light."

The special Examinations in January 1900 will be on:

Higher Division.—Newton's "Three Sections" (Goodwin's

"Course of Mathematics," Frost's "Newton," or any good edition of the *Principia*).

Lower Division. Herschel's "Astronomy," the smaller work, in a recent edition, omitting the chapter on Perturbations. A series of explanatory lectures will be given by the Class-Assistant before this Examination.

The subjects for the March Examinations in both Divisions will be Kinematics and Dynamics. The range will depend upon the progress which the Class has made in these subjects.

Intermediate Honours Class—Monday, Wednesday, Friday, 9 to 10.

This Course, given by the Lecturer on Applied Mathematics, will include the more elementary parts of Dynamics of Particles, Rigid Solids, and Flexible Strings; the Theory of the Potential; and Thermodynamics.

For syllabus of Advanced Science (Dynamics) Class, see Courses in Science.

Advanced Honours Class—Monday, Wednesday, Friday, 12 to 1.

This Course (given by the Professor), the subjects begun in the Intermediate Course will be further developed: and Thermodynamics, with one or more special branches of Applied Mathematics [such as the Kinetic Theory of Gases, the Lunar Theory, the Undulatory Theory, Vortex Motion, &c.] will be fully treated. It is most important to observe that no one can possibly profit by attendance at this class, unless he has fully mastered the subjects treated in the Intermediate Class.

One of the text-books in each of these Honours Courses is Tait's *Dynamics*, a reprint of "*Mechanics*," in the last edition of the "Encyc. Brit."

SUMMER CLASS OF PHYSICS, SPECIALLY FOR MEDICAL STUDENTS.

For particulars, see Courses in Faculty of Medicine.

PHYSICAL LABORATORY.

This has been established with the view of affording students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries. The Laboratory is open five or six hours daily in the Winter and Summer Sessions, under superintendence of the Professor and his Class-Assistant. Fee, £6, 6s. for the Winter Session. It is hoped that, with the aid of the valuable collection in the Museum, results of real use to science may be obtained.

A practical class, for instruction in the elementary processes of measuring Time, Mass, Length, Angle, Force, &c., will be formed in Winter and also in Summer. Each Course will extend to about three months. Fee, £2, 2s.

ELEMENTARY DYNAMICS.

C. G. KNOTT, D.Sc., *Lecturer.*

This Half-Course, to be given in the Summer Session 1900, is primarily intended to prepare students for the Intermediate Honours Class in Natural Philosophy and the Advanced Science Class in Dynamics (Engineering). To facilitate the work of these Winter Classes, all Honours and Science Candidates are strongly recommended to take this Course, in which only Mathematics of the standard of the Higher Preliminary will be used. The Course will include Kinematics and Kinetics of a Particle, Impact, Simple cases of Kinetics of a Solid, Equilibrium, Statics, Hydrostatics.

Although the work will reach a somewhat higher standard than is necessary for the Dynamical part of the M.A. Pass and 1st B.Sc. Examination in Natural Philosophy, the Class will be serviceable to Students preparing for this Examination. The Course will also be useful to men preparing for the Civil Service Examinations.

Text-Books recommended. MacGregor's *Dynamics;* Pinkerton's *Hydrostatics and Pneumatics;* Minchin's *Statics* (Vol. I.).

Summer Session, 1900.

ADVANCED EXPERIMENTAL PHYSICS.

W. PEDDIE, D.Sc., *Lecturer.*

In this Class certain subjects, which may be treated mathematically in the Winter Advanced Honours Course of Natural Philosophy, will be treated fully from the experimental point of view. The Course is also intended for undergraduates in Experimental Science. It is proposed to treat experimentally the advanced parts of Light, Electricity, Magnetism, &c. In connection with the Undulatory Theory, the following subjects will be discussed: Reflection, refraction, and interference of ordinary and of polarised light; conical refraction; diffraction; electro- and magneto-optics; and the optical phenomena of crystalline substances. In Electricity and Magnetism such subjects as the discharge of electricity through gases; the screening effect of conducting sheets, and other phenomena associated with rapidly alternating electromotive forces; electromagnetic undulations; magnetic hysteresis, &c., will be treated. The experimental investigation of reciprocally related physical phenomena will be specially illustrated from various branches of physics: and, on the dynamical side, special attention will be devoted to the realisation of dynamical systems illustrative of physical phenomena.

Tutorial Class.

NATURAL PHILOSOPHY (*Advanced Honours*).

The work will correspond as closely as possible to that of the Winter Advanced Honours Course. The Class is intended for Students preparing for the above Winter Course, or for the Advanced Honours Examination.

ASTRONOMY.

PROFESSOR COPELAND.

(*Eighty Lectures, and, on different days, Twenty Meetings of two hours each for Observatory work.*)

Lectures on Practical Astronomy will be delivered on Mondays, Tuesdays, Wednesdays, and Thursdays. Instruction in the use of portable and fixed astronomical instruments will be given at the Royal Observatory on Blackford Hill, on Fridays, beginning at 8 P.M. Attendance at the evening demonstrations is obligatory on all who take Astronomy as a qualifying course for graduation. The Lectures will be divided into two sections, the first of which will embrace the theory and use of Astronomical Instruments, together with as much General Astronomy as is requisite to guide the student in making observations in the field as well as in an observatory. The Second Division will treat of the utilization of observations of Comets, etc., in the computation of orbits and ephemerides.

CHEMISTRY.

PROFESSOR CRUM BROWN.

This Course, the same as for Students of Medicine and Science, embraces One Hundred Lectures and Fifty Meetings for Practical Work in the Practical Chemistry Class-Room.

ZOOLOGY.

PROFESSOR EWART.

This Course, the same as for Students of Medicine and Science, embraces Fifty Lectures and Fifty hours for Practical Work.

BOTANY.

PROFESSOR BAYLEY BALFOUR.

This Course, the same as for Students of Medicine and Science, embraces Fifty Lectures and Fifty hours for Practical Work.

GEOLOGY, INCLUDING MINERALOGY.

PROFESSOR GEIKIE.

This Course, the same as for Students of Science, embraces Seventy Lectures, Twenty Hours for Practical Work, and Ten Field Demonstrations.

IV.—DEPARTMENT OF HISTORY AND LAW.

HISTORY.

PROFESSOR [1]

The Course qualifies for Graduation in Arts. The subject, until further notice, is GENERAL BRITISH HISTORY, divided into the following Periods and Subjects :—

Part I.—1. Celtic and Roman Britain (to A.D. 449). - 2. The English and Scottish Conquests (449-613). — 3. The Early Church.—4. The English and Scottish Kingdoms (613-855).—5. The Danish Conquests (855-1042).—6. The Norman Conquest (1042-1071).—7. The making of Scotland (685-1057).—8. The Norman Monarchy (1071-1154).—9. The Angevin Monarchy (1154-1199).—10. Celt and Teuton in Scotland (1057-1214).—11. Norse and English Conquests in Wales and Ireland (613-1215).—12. The Charters (1199-1217). — 13. The growth of Parliament (1217-1272). — 14. England, Wales, and Scotland (1215-1328).—15. The Great War with France, part i. (1327-1377).—16. The Lancastrian Revolution (1377-1413).—17. Independent Scotland (1328-1424).—18. The Great War with France, part ii. (1413-1453).—19. The Yorkist Revolution (1450-1485).—20. King and Nobles in Scotland (1424-1488) ; Ireland (1215-1485).

Part II.—21. The Tudor Monarchy (1485-1603).—22. The Reformation in England and Scotland (1529-1603).—23. England, Scotland, and Europe (1485-1603).—24. Crown and Parliament (1603-1640).—25. The Long Parliament and the Protectorate (1640-1660).—26. Restoration and Revolution (1660-1689).—27. Colonies and Commerce (1600-1689).—28. Whigs and Tories : William III and Marlborough (1689-1714). — 29. Scotland and Ireland : the Union (1689-1714).—30. The Whig Supremacy (1714-1760).—31. India and America (1714-1763).—32. George III and the Parliament (1760-1783).—33. The American War (1763-1783).—34. Pitt and the French Revolution (1783-1815).—35. Ireland : the Union (1715-1800).—36. India (1763-1815).—37. Reaction and Reform (1815-1832).—38. The Reformed Parliament (1832-1866).—39. Foreign Policy, Colonies

1 Vacant at date of going to Press.

and India (1815-1858).—40. The growth of Democracy (1866-1885).

WORK OF THE CLASS.—1. Lecture daily, except Saturdays, at twelve.

2. Three or four Class Examinations will be held, and two or more Essays set, during the Session. Honours will be awarded to candidates distinguished both in the examinations and in the essays.

3. The History Reading-Room (adjoining Professor Kirkpatrick's Class-Room) may be consulted by members of the History Classes on Mondays and Fridays from 11 to 1, and on Wednesdays from 12 to 2.

Books recommended.—For elementary purposes, S. R. Gardiner's "Student's History of England," J. R. Green's "Short History of the English People," J. F. Bright's "History of England," or Ransome's "Advanced History of England," with Hume Brown's "History of Scotland," and Morris' "History of Ireland" (Cambridge Series). For wider study, see the lists given in the "Introduction to English History" by Gardiner and Mullinger, part ii.

Honours Classes.

PROFESSOR [1]

The subject for the Session 1899-1900 is

GREAT BRITAIN AND EUROPE, 1815-1878.

Books recommended. — Lodge, "Modern Europe"; Fyffe "History of Modern Europe," Vols. II. and III.; Andrews, "Political Development of Europe"; Lavallée, "Histoire des Français"; Stillman, "Union of Italy"; Countess Cesaresco, "Cavour"; Lowe, "Life of Bismarck."

This Course of Fifty Lectures qualifies for graduation in Arts with Honours in History. The Lectures will be given on Mondays, Wednesdays, and Fridays at 10.

Two class examinations will be held, and several essays set, during the session. Students in this class may attend Mr Heatley's advanced course on "The English Kingship"

[1] Vacant at date of going to Press.

(Wednesdays at 11), without fee, and may use the History Reading-Room.

The Honours Subject for the session 1900-1901 will be announced shortly.

European History: 1715-1848.

Lecturer—D. P. HEATLEY, *University Assistant.*

A Course of Lectures on Mondays, Wednesdays, and Fridays at 11, beginning on Wednesday, 25th October.

Honours Course—Fifty Lectures.

PROFESSOR KIRKPATRICK.

I. Introductory—Precursors of Wycliffe—Wycliffe's place in political History—Lollardy. II. Survival of Wycliffite doctrines—Constitutionalism in the Church—The Bohemian Revival—Hus, Jerome, Payne. III. Political condition of England after Wycliffe's death—The Empire and the Papacy—The Reformation—Its causes, its political and other aspects, especially in England. IV. Original sources.

Books recommended.—Lorimer's translation of Dr Lechler's Wycliffe; "Chronicon Angliæ," ed. by E. M. Thomson, 1874; Works of Langland and Chaucer; Walsingham's "Historia Anglicana," ed. by Riley (Rolls Series); Loserth's "Wycliffe and Huss"; James Baker's "A Forgotten Great Englishman (Relig. Tract Soc.); Wycliffe's "Trialogus," "De Officio Regis," and "De Civili Dominio"; Creighton's "Papacy during the Reformation (vols. i and ii); Pecock's "Repressor" (Rolls Series); Roger's "Gascoigne"; Fortescue's "Governance of England," and "de Laudibus Legum"; Stubbs's "Lectures on Mediæval and Modern History"; Seebohm's "Oxford Reformers"; Brewer's "Henry VIII.," ed. by J. Gairdner.

These Lectures, qualifying as a full course for graduation in Arts with Honours in History, or with Honours in English, or as a half course for graduation in Law, will be given on Mondays, Tuesdays, and Thursdays, at 4 P.M., beginning on Tuesday, 17th October 1899. (After Christmas, on Tuesdays and Thursdays only). Students attending them may use the His-

tory Library, superintended by Mr Heatley, the Assistant in History, on Mondays and Fridays from 11 to 1, and Wednesdays from 12 to 2. They may attend Mr Heatley's advanced course on "The English Kingship," on Wednesdays, at 11, without additional fee. Mr Heatley's Summer and Winter Courses, of Fifty Lectures each, are specially recommended. (Fee, £2, 2s. for each.)

CLASSICAL ARCHÆOLOGY AND HISTORY OF ANCIENT ART.

PROFESSOR BALDWIN BROWN.

This Course qualifies as an alternative subject for Honours in History. For details see page 71.

FINE ART.

PROFESSOR BALDWIN BROWN.

This Course of one hundred Lectures, qualifying for the M.A. degree, is designed—

1. To bring before students, by critical descriptions and illustrations, the chief ancient and modern works of Architecture, Sculpture, Painting, and the Decorative or Industrial Arts.

2. To show how these works are connected in origin and use with the national and social life of successive epochs; and, conversely, how Artistic Monuments illustrate Classical and Biblical literature, and bear on historical investigation in general.

3. To explain as far as practicable the technicalities of the various Arts, and to open up those aspects of Art which present themselves naturally to the artist, but are sometimes overlooked by the literary student.

On the historical side—

The characteristics of different styles and schools of Art will be broadly indicated, but this part of the subject, which can be studied from books, will not be dwelt upon at length.

On the artistic side—

Particular stress is laid on the explanation of different materials and technical processes, as upon these largely depend

the particular forms in which beauty is realised in the various works of human hands.

Arrangements for the work of the Class :—There are Lectures daily at 3 P.M. Three Class examinations are held, and a series of eight Essays are set for the Cousin Prize (£15). The Essays, to the number of at least five, are included in the work required from those taking the Course for Graduation.

The Class Library, Reading Room, and collections of examples are open to members of the Class.

Museums, &c., are visited from time to time on Saturdays.

The Professor's manual, "The Fine Arts," is used, so far as it goes, as a text-book. Other books to be read by those taking the Course for Graduation are indicated on page 135.

CONSTITUTIONAL LAW AND HISTORY.

PROFESSOR KIRKPATRICK.

This Course is divided into two half-courses, the first treating of the Constitutional History of England, the second treating mainly of that of the United States of America, that of France, Germany, Switzerland, etc. (see under Faculty of Law).

ECCLESIASTICAL HISTORY.

PROFESSOR TAYLOR.

(See under Faculty of Divinity.)

ROMAN LAW.

PROFESSOR MACKINTOSH.

The full Course qualifying for Graduation in Arts extends to about ninety meetings of the Class. It is divided into two distinct parts.

I. HISTORY.—This Course, extending up to the Christmas vacation, includes a sketch of the Constitutional and Legal History of Early Rome; a survey of the primitive law in its various branches; and a discussion of the Sources of the law, the rise and progress of Jurisprudence, Codification,

and other topics belonging to the external history and the general part of the civil law. It is intended to serve as a historical introduction to the study of the special departments. The historical lectures qualify as a Half-Course for Graduation in Arts.

II. INSTITUTES.—The second half of the Course will be devoted to a systematic exposition, in detail, of the law relating to persons and the family, and to property and real rights. In general the order of Justinian's Institutes is followed.

The Lectures on Succession and Contracts are given in the Summer Session. See under Faculty of Law.

Fee for the Half-Course, £2, 2s.; for the full Arts Course, £4, 4s.

Text-Books.—The Institutes of Gaius and of Justinian.

In connection with the historical lectures, students are referred to Muirhead's "Historical Introduction to the Private Law of Rome," and Maine's "Ancient Law."

PUBLIC INTERNATIONAL LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

This Course of Forty Lectures commences on 9th January 1900, at 2. The Course will include—

1. An historical retrospect.
2. Some account of the science and literature of Public International Law.
3. An examination of the sources, and a critical exposition of the leading doctrines, of Public International Law.

Students are recommended to consult Wheaton's History of the Law of Nations, Introduction; Nys's Les Origines du Droit International; Phillimore's International Law; Lawrence's Essays on Modern International Law; Hall's International Law; Westlake's International Law; Pitt Cobbett's Select Cases; Lawrence's Principles of International Law; Walker's International Law; Holland's Studies in International Law. *Vide* under Faculty of Law.

ADVICE TO STUDENTS REGARDING CURRICULA IN ARTS.

1. Every intending Arts Student is advised to make himself familiar with the Regulations for Graduation in Arts before commencing his course. In particular, he should make sure, in the first place, that he has complied with all the Conditions of the Preliminary Examination. He should then choose a Curriculum to suit his requirements; see that it satisfies the regulations; that he has all the qualifications necessary for entering certain Classes; and that his studies are spread over the required number of Sessions. In any case of doubt he should consult the Dean of the Faculty.

2. While Students are fully at liberty to arrange their Curricula as they deem best for their particular requirements, the Faculty of Arts strongly recommend Candidates for the *Ordinary Degree* to devote their First Session to Languages and Mathematics, and to Junior Classes when such are necessary.

The Third Session should be devoted to those subjects which presuppose a previous training in others, such as English Literature, Political Economy, Education, the advanced subjects in History, and the Law subjects.

3. Candidates for Honours Degrees are advised so to arrange their classes that they may be able to devote the whole of the year immediately preceding the Honours Examination to the special work of their Honours Group.

4. Honours Students and Students studying for special examinations, should, as early in their Course as possible, consult the Professors of the Special Subjects which they are to study. Professor Hardie is Convener of a Committee specially charged with the Supervision of those studying for the Indian and Home Civil Service Examinations.

The attention of the students referred to under this head is directed to the Summer Classes, which afford them obvious facilities for arranging their studies so as to economise time, *e.g.*, they may take Summer half-Courses in some of the subjects in which they have to pass on the standard of the Ordinary Degree.

5. For special and detailed advice as to each subject, students should consult the several Professors or Lecturers *before entering upon their Curricula*. In particular, those who intend proceeding afterwards to Degrees in Divinity, Law, Medicine, Science, or Music, should in cases of doubt, consult the Deans of these Faculties as to the most appropriate Arts Curriculum.

Graduation in Arts.[1]

Candidates who commenced attendance on qualifying Classes before 1st October 1892 are referred to the CALENDAR *for 1895-96, or previous* CALENDARS.

The Degree admits to professional Study, to the Army, &c. It also qualifies for Masterships of Public Schools, subject to an examination in the methods of instruction, and three months' attendance in a Public School for the practice of teaching. Those who take the Schoolmaster's Diploma are now exempted from this Examination if Graduates of this University.

ACADEMICAL YEAR.

I. The Academic year commences on the first day of October. The winter session opens about the middle of October, and includes not less than twenty teaching weeks. The summer session opens about the beginning of May, and includes not less than ten teaching weeks.

II. The Curriculum for the degree of Master of Arts (M.A.) extends over not less than three winter sessions, or two winter sessions and three summer sessions.

PRELIMINARY EXAMINATION.[2]

III. (1) Before entering on the Curriculum (subject to the *proviso* contained in Section IV., Sub-section 1) each student must pass a Preliminary Examination in the following subjects :—

1. English.
2. Latin or Greek.
3. Mathematics.
4. One of the following :—Latin or Greek (if not already taken), French, German, Italian, or such other language as the Senatus Academicus may approve,[3] Dynamics.

(2) The examination must be passed in the matters and on the standards hereinafter defined ; but there is a higher and a lower standard in Latin, Greek, and Mathematics.

Candidates must pass on the higher standard in at least one of these three subjects, and may pass on the lower standard in either or both of the remaining two ; subject always to the conditions relative to attendance contained in Section IV. hereof.

(3) English includes Grammar and Composition, and the outlines of Geography and British History, and the standard must not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(4) Latin and Greek comprise grammatical questions, translation

[1] The annual amount of Matriculation, Class Fees, &c., of the regular course in Arts may be estimated at about £10, 10s. See Advice to Students regarding Curricula, page 104.

[2] See also additional Regulations of the Joint Board of Examiners, pages 420-434 inclusively.

[3] Any Candidate who proposes to be examined in a language other than those above named, is required to apply to the Senatus for approval before 1st February or 1st July for the Spring and Autumn Examinations respectively.

into English from Latin or Greek authors not previously prescribed, and translation of plain passages or easy sentences from English into Latin or Greek. The higher standard must not be lower than that formerly adopted in the examination for a Curriculum of three sessions, or for the Higher Grade Leaving Certificate of the Scotch Education Department, and the lower standard must not be lower than that presently adopted for the Lower Grade Leaving Certificate of the said Department.

(5) French, German, and Italian comprise grammatical, literary, and easy philological questions, translation into English from French, German, or Italian authors not previously prescribed, and translation from English into French, German, or Italian; and the standard must not be lower than that presently adopted for the Higher Grade Leaving Certificate of the Scotch Education Department.

(6) Mathematics on the lower standard comprises (1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest; (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations; (3) Geometry—Euclid, Books I., II., and III. (or their equivalents), with easy deductions. Demonstrations other than Euclid's will be accepted if they assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

(7) Mathematics on the higher standard, in addition, comprises Euclid, Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with deductions, Quadratic Equations, Trigonometry to the solution of Triangles inclusive, and the use of Logarithmic Tables.

(8) Dynamics means the Elementary Statics and Kinetics of Solids, Liquids, and Gases.

(9) A candidate must pass in all the required subjects at one or not more than two examinations, but may offer himself for re-examination as often as may be necessary to satisfy this condition.

IV. (1) Attendance on any class does not qualify for graduation, unless the whole Preliminary Examination has been passed. But any Student who has passed in Latin, Greek, or Mathematics on the higher standard may attend a qualifying class in such subject or subjects without having passed in the other subjects of the examination, provided always that (*a*) no candidate will be allowed to present himself for examination in any subject qualifying for graduation until he has passed the whole Preliminary Examination, and (*b*) no Student will be admitted to a degree in Arts unless he has attended qualifying classes in the University granting the degree, or in another Scottish University, as provided by Section XXV. hereof, for three Academic years after he has completed his Preliminary Examination.

(2) Attendance on a class in any language included in the Prelimin-

ary Examination does not qualify for graduation, unless the candidate, before entering the class, has passed the Preliminary Examination in that subject, and on the higher standard where a double standard is provided. He may, for that purpose, attend any Preliminary Examination held during the course of his study, taking only the paper set in that subject; provided always that the provisions of the subsection immediately preceding have been satisfied. [1]

(3) Attendance on a class in any language not included in the Preliminary Examination will not qualify for graduation, unless the candidate has previously passed an examination in that language on a standard as nearly as possible equivalent to the higher standard of the languages included in the Preliminary Examination.[2]

(4) Attendance on a class of Mathematics or Natural Philosophy will not qualify for graduation unless the candidate, before entering the class—in addition to the examination in Mathematics on the Lower Standard required of all students—has passed an examination in the following subjects [Intermediate Mathematics][1]:—

(*a*) Euclid: Book VI., Propositions 1-19, or Geometry equivalent thereto.
(*b*) Algebra: Quadratic Equations, Ratio and Proportion.
(*c*) The Trigonometry of Right-angled Triangles.

(5) A student, who, having passed the Arts Preliminary Examination in accordance with these Regulations, has thereafter obtained a certificate of attendance on a qualifying class of Mathematics, will not be required to pass any further examination in Mathematics as a condition of entering on the course of study for graduation in Science.

V. (1) The Preliminary Examination is held at each University twice in each year, and is conducted in writing.

(2) The Joint Board of Examiners has power to accept the Higher Grade Leaving Certificate of the Scotch Education Department in any subject as an equivalent for the Preliminary Examination in that subject; and to accept the Lower Grade Leaving Certificate of the said Department as an equivalent for the Preliminary Examination on the lower standard in Latin, Greek, and Mathematics; provided they are satisfied that the standard of the examination, at which the said certificates were granted, is not lower than that required by these Regulations.

(3) The Joint Board has power to determine what examinations, if any, other than those for the Leaving Certificates of the Scotch Education Department may be accepted as equivalent to the Prelimin-

[1] Candidates are required to enter for examination at the usual periods and to pay the fee of 10s. 6d.

[2] Candidates who require to pass an examination for entering on the courses of Sanskrit, Hebrew, Arabic, Syriac, or Celtic, are required to enter their names and pay the fee of 10s. 6d. on or before 19th September.

ary Examination in whole or in part, provided they are satisfied that such other Examinations are in fact equivalent thereto.

ORDINARY DEGREE.[1]

VI. Candidates for the ordinary degree of Master of Arts may follow the Curriculum and take their degree in the subjects recognised for graduation under the Universities (Scotland) Act, 1858, subject always to the preceding provisions of these Regulations; or they may vary the Curriculum for graduation under the regulations contained in the immediately succeeding sections.

VII. (1) Candidates must attend full courses in at least seven subjects, and are examined on these subjects.

(2) Of these subjects four must be (*a*) Latin or Greek (not modern Greek); (*b*) English or a Modern Language (French, German, Italian, or Spanish), or History; (*c*) Logic and Metaphysics, or Moral Philosophy; (*d*) Mathematics or Natural Philosophy.

(3) The remaining subjects may be selected by the candidate from the Departments specified in Section IX. of these Regulations, under the following condition:—That the whole subjects taken must include either (*a*) both Latin and Greek (not modern Greek), or (*b*) both Logic and Moral Philosophy, or (*c*) any two of the following three subjects,—Mathematics, Natural Philosophy, and Chemistry.

VIII. (1) Each of the subjects must be studied in a full course of not less than one hundred meetings of the class on separate days, except in cases where the Senatus, with the approval of the University Court, have sanctioned, as qualifying for graduation, half courses of not less than fifty meetings on separate days; or where the Senatus, with the approval of the said Court, may, having regard to the nature of the subject, sanction full courses of less than one hundred or half courses of less than fifty meetings respectively.

(2) Two half-courses are held to be equivalent to a full course in such cases as the Senatus, with the approval of the University Court, may determine, and under such regulations as may from time to time be made for that purpose.

(3) Where a subject is taught in a practical class, as well as in a systematic class, the Senatus, with the approval of the University Court, regulates the course of study and determines the relative proportion of lectures and laboratory or practical work.

IX. The Departments of Study for graduation in Arts in each University, if adequate instruction is provided, include the following subjects, with such additions or modifications in any University as may hereafter be made by Ordinance of the University Court:[1]—

[1] See advice to Students regarding Curricula, p. 104.

1. *Language and Literature.*

Latin.	Italian.
Greek.	Spanish.
Modern Greek.	Sanskrit.
English.	Hebrew.
French.	Arabic or Syriac.
German.	Celtic.

2. *Mental Philosophy.*

Logic and Metaphysics.	Education (Theory, History, and Art of).
Moral Philosophy.	
Political Economy.	Philosophy of Law.

3. *Science.*

Mathematics.	Zoology.
Natural Philosophy.	Botany.
Astronomy.	Geology.
Chemistry.	

4. *History and Law.*

History.	Constitutional Law and History.
Archæology and Art (History of).	Roman Law.
	Public Law.

X. Candidates who produce certificates that they have satisfied all the conditions prescribed by these Regulations, and who have passed the necessary examinations, are entitled to receive the ordinary degree of M.A. on payment of the fees required.

DEGREE WITH HONOURS.[1] [2]

XI. (1) The degree of M.A. may be taken with Honours in any of the following Groups, in which Honours Classes have been established in at least two subjects :—

(*a*) Classics (*i.e.* Latin and Greek, with optional subjects such as Comparative Philology, Ancient Philosophy, and Classical Archæology).
(*b*) Mental Philosophy.
(*c*) Mathematics and Natural Philosophy.
(*d*) Semitic Languages.
(*e*) Indian Languages.

[1] *Civil Service Commission Examinations.*—Candidates for Graduation in Arts with Honours are reminded that most of their subjects are admissible also in the Public Examinations held by the Civil Service Commission and other Public Examinations, on the results of which many important posts in India and at home are awarded each year. A Committee of the Senatus has been formed for the purpose of directing the studies of Students who have these examinations in view. Those who desire advice or information on this subject should apply to Professor Hardie, Convener of the above-mentioned Committee.

[2] See advice to Students, p. 104.

(*f*) English (Language, Literature, and British History). English Literature is the chief subject of this group, the linguistic and historical subjects being regarded as subsidiary.
(*g*) Modern Languages and Literature.
(*h*) History.
(*i*) Economic Science (*i.e.* Political Economy, with either (*a*) Moral Philosophy or (*b*) History as Supplementary Honours subjects).

(2) Every candidate must take up at least five subjects. Two of these subjects, under separate Professors or Lecturers, must be selected from the candidate's Honours Group; and the five subjects must include one from each of the Departments of Language and Literature, Mental Philosophy, and Science, set forth in Section IX. of these Regulations.

(3) Every candidate must attend seven Classes, taking two Classes (one of which must be an Honours Class) in each of his Honours subjects.

(4) A candidate who has obtained Honours in any one Group may, before graduating, present himself again for examination in a second Honours Group. In such a case, he will not be required to attend more than two additional Classes, which must be Honours Classes, in the second Group.

Notwithstanding the foregoing provisions of this sub-section and of Section XIV. sub-section (1) hereof, a candidate who has already graduated may present himself for examination in any Honours Group within five years from the date of his first matriculation after having passed the Preliminary Examination. If he be successful in obtaining Honours, he shall receive a special certificate stating the Honours Group in which he has presented himself, and the class he has obtained in the Group.

(5) The examination in the subjects comprised in the candidate's Honours Group must be of a higher standard than that required for the ordinary degree of M.A. In his other subjects the standard will be that required for the ordinary degree.

(6) The Senatus, subject to the provisions of Sections XVI. to XX. of these Regulations, from time to time determines what subjects are comprised in each Group, what subjects may be taken in half-courses, and in which Group they may be taken: Provided that no new Group shall be instituted except by Ordinance of the University Court.

(7) The provisions of Section VIII. of these Regulations applies to Candidates for Honours; but, in their case, not fewer than fifty meetings, on separate days, extending over an entire winter session, will constitute a full course for an Honours Class; and not fewer than twenty-five meetings on separate days, extending over half a winter session, or an entire summer session, will constitute a half course.

XII. (1) Every candidate must include Latin, or Greek, either in his Honours Group or as one of the subjects in which the standard of examination is that required for the ordinary degree of M.A.

(2) Greek is compulsory for candidates for Honours in Mental Philosophy.

(3) Candidates for Honours in English, or Modern Languages and Literature, or History, or Economic Science (Groups *f*, *g*, *h*, *i* of Section XI. hereof) must include within the whole subjects taken for their degree (*a*) Logic and Metaphysics or Moral Philosophy, and (*b*) Mathematics or Natural Philosophy.

(4) Every candidate must obtain a certificate of attendance on the class of Latin or Greek, under sub-sections (1) or (2) of this section, before he offers himself for examination in his Honours group of subjects.

(5) Candidates for Honours in Economic Science (Group *i* of Section XI. hereof), who take Moral Philosophy as their supplementary Honours subject, may take a half course in the History of Civil Law and a half course in the Philosophy of Law, which, together, shall be deemed to constitute one of the subjects in which the standard of examination is that required for the ordinary degree of Master of Arts.

Candidates for Honours in Mental Philosophy who have included Latin, but not Greek, as one of the subjects in which the standard of examination is the same as that required for the ordinary degree of Master of Arts, will be deemed to have satisfied the provisions of sub-section (2) of this section, if, before they offer themselves for the Honours Examination in Mental Philosophy, they have passed a special examination in translating into English passages from the works of Greek philosophical authors, including passages from the works of such authors not previously prescribed.

XIII. (1) The whole examination in the candidate's Honours Group must be taken at one time, and the whole examination necessary for graduation with Honours must be taken within five years from the date of the candidate's first matriculation after having passed the Preliminary Examination, unless that period shall be extended by the Senatus on special cause shown; and in every such case the Senatus must make a report to the University Court setting forth the reasons for the extension.

(2) Candidates for Honours may be examined, at any time during their Curriculum, in the three subjects in which the standard of examination is that required for the ordinary degree of M.A.

XIV. (1) A candidate who has passed the examinations necessary for the ordinary degree of M.A., but who has not yet graduated, may present himself for Honours within five years from the date of his first matriculation after having passed the Preliminary Examination, and will not be required to attend further classes:—subject always to the provisions of Section XII. hereof.

(2) No one is allowed to present himself a second time as a candidate for the degree of M.A. with Honours, who, upon examination, has failed to obtain Honours.

(3) A candidate is held to have presented himself who has notified his name for examination in accordance with the University regula-

tions. But it will be in the power of the Senatus to relax this rule on special cause shown; and in every such case the Senatus must make a report to the University Court setting forth the reasons for the relaxation.

XV. (1) In each Group there are three Grades of Honours, to be denominated respectively the First, Second, and Third Class. The names of the candidates entitled to Honours in each class are arranged in alphabetical order.

(2) For the degree of M.A. with Honours a Diploma is given setting forth the subjects in which he has taken Honours.

BOARDS OF STUDIES.

XVI. The Senatus of each University from time to time institutes Boards of Studies corresponding as nearly as may be to the Departments of Study enumerated in Section IX. of these Regulations.

XVII. Each Board of Studies consists of such Members of the Senatus and Lecturers in the University as the Senatus may from time to time select, and the Senatus appoints one of the Members of the Board to be Convener thereof.

XVIII. Before the end of each winter session each Professor and Lecturer in the said Departments of study must submit to the proper Board of Studies for its approval a syllabus of the subjects and books proposed for the work of his class for the next Academical year; and also a syllabus of the subjects and books to be prescribed for the Examinations for the Ordinary Degree of M.A. in the next Academical year, and for the Honours Examinations in the Academical year next but one. As soon as such approval has been given, these syllabuses must be transmitted to the Faculty of Arts for its consideration. The syllabuses, with such observations as the Faculty of Arts may see fit to make thereon, must then be transmitted to the Senatus for its sanction.

XIX. (1) Before the end of each winter session each Board of Studies must prepare a scheme, defining, for the Academical year next but one following, the classes which are deemed to be Honours Classes, and the subjects and courses of reading for Honours in its Department, and must report the same to the Faculty of Arts for its consideration. The scheme, with such observations as the Faculty of Arts may see fit to make thereon, is then transmitted to the Senatus for its sanction.

(2) Each Board must in like manner make recommendations through the Faculty of Arts to the Senatus in regard to the half-courses which may be sanctioned under these Regulations, and the lectures which may be given on special subjects.

XX. The Principal and the Dean of the Faculty of Arts are *ex-officio* Members of each Board of Studies. The Convener presides, and, in his absence, each meeting appoints its own Chairman, and every Chairman has a deliberative, and, in cases of equality, a casting vote.

GENERAL.

XXI. In the case of a foreign student, whose native language is other than English, the standard required in English in the Preliminary Examination is such as the Joint Board of Examiners deems sufficient. In the case of a student, whose native language is other than European, the Senatus may accept as an alternative to Latin or Greek any other classical language, such as Sanskrit or Arabic, subject always to the provisions of Section IV., Sub-section 3 hereof.

XXII. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class as qualifying for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint; and in every such case the Senatus must make a report to the University Court setting forth the reasons for the relaxation.

XXIII. The examination in all the languages in the Curriculum must, as far as possible, be on the same standard in examinations for the same degree, and will in all cases test the candidate's knowledge of the history and literature of the several countries.

XXIV. A candidate for the degree of M.A. is not deemed to have attended a class as part of the Curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XXV. A student, who has given attendance at classes recognised as qualifying for graduation during one or more sessions in any one or more of the Scottish Universities, may complete his Curriculum by giving attendance during the remainder of his course in another Scottish University, and may proceed to a degree in the latter University in the same way, in all respects as if the previous part of his Curriculum had been taken therein: Provided always that every such student must produce, to the satisfaction of the Senatus of the latter University, certificates of his having passed the Preliminary Examination, and of his attendance at the former University or Universities, and must be examined in all the subjects necessary for the degree of M.A. by the Examiners of the University in which he completes his Curriculum, and in which alone he will be allowed to graduate; and that no such student will be admitted to a degree in any University unless he has given attendance in such University during the last winter session of his Curriculum, and one other winter session or two summer sessions.

XXVI. A candidate for the degree of M.A. with Honours, who has failed to be placed in any class, may, provided that in the opinion of the Examiners he has given evidence of sufficient attainments in any subject for the ordinary degree of M.A., receive from them a certificate of having passed in such subject, which will count *pro tanto* as part of the examination required under the regulations for the ordinary degree of M.A.

XXVII. The degree of M.A. is in no case conferred on persons who have not satisfied the conditions hereinbefore set forth, and is not conferred *honoris causa tantum*.

XXVIII. A student who, at the time these Regulations came into operation, had commenced his course of study with a view to graduation in Arts in any of the Scottish Universities under the regulations in force at the time in such University, may complete his course and become a candidate for the degree of M.A., with or without Honours, in conformity with such regulations. And any such student who has passed the examination hitherto required for admission to a Curriculum of three sessions, if he desire to come under these regulations, is exempted from the Preliminary Examination herein required.

XXIX. Students may attend any classes without having passed the Preliminary Examination within the meaning of these Regulations, but such attendance will not qualify for graduation.

XXX. Attendance on classes in the Faculty of Arts in which the teaching is on the standard at present recognised for the classes hitherto known as junior or middle classes, will in no case qualify for graduation. It is competent for the University Court in each University to discontinue the Junior Classes, or Middle Classes, where such exist, in Latin, Greek, and Mathematics, when, in the opinion of the Court, the provision for Secondary Education in schools throughout the country is sufficient to render such classes no longer necessary.

XXXI. Ordinances numbered 12, 14, 18, and 69 of the Commissioners under the Universities (Scotland) Act, 1858, as altered under the provisions of the said Act, are repealed, in so far as they are inconsistent with these Regulations.

Graduation of Women.

I. It is in the power of the University Court to admit women to graduation.

II. The conditions for graduation are the same for women as for men, subject to the following modifications, which have effect until provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men:—

(1) Section XXV. of Regulations for Degrees in Arts is not applicable to the graduation of women in Arts.

(2) So long as within the Faculty provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, it is in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any Scottish University, or from any teacher or in any Institution, within the University town, recognised for the purposes of graduation by the University Court: Provided always that every candidate for graduation produces evidence of having

satisfied the conditions with respect to the Preliminary Examination, and be examined in all the subjects necessary for graduation by the Examiners of the University.

III. So soon as within the University provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men, the conditions for the graduation of women shall be the same as the conditions for the graduation of men.

IV. (1) Women who may attend classes in the University must matriculate, paying a fee of the same amount as that exigible for other students. (2) Women, who are candidates for graduation but not matriculated students, and who may attend classes within a University town, under the provisions of Section II. (2) hereof, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by students of the University and having, in respect of such payment, a right to the use of the Library of the University.

Additional Regulations by the University Court.[1]

Any Woman who has received the requisite instruction in Chemistry, Botany, and Zoology in any Scottish University, or in the Medical College for Women, Chambers Street, Edinburgh, will (subject to the provisions of Ordinance No. 18, General No. 9, Regulations for the Graduation of Women,[2] &c.) be admitted to Examination in these subjects for Graduation in Arts. Women may attend within the University the advanced Courses in Botany and Zoology, and the Advanced Lecture Courses in the Chemistry Department.

Regulations for Special Study and Research, for Appointment of Research Fellows, &c.

I. It is in the power of the Senatus Academicus, with the approval of the University Court, to make regulations under which graduates of Scottish Universities, or of other Universities recognised by the University Court for the purposes hereof, or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research, may be admitted to prosecute such study or research in the University.

[1] Extra Academical Teachers in Edinburgh, whose Lectures qualify Women Students for Graduation in Arts in this University:—

T. W. Drinkwater, Ph.D., Chemistry and Practical Chemistry, 17th December 1894.

J. Arthur Thomson, M.A., Zoology, 17th December 1894.

Robert Turnbull, B.Sc., Botany, 17th June 1895.

[2] See Ordinance Appendix to Calendar, 1892-93, page 51.

II. It is the duty of the Senatus Academicus—

(1) To receive and decide upon all applications for admission to prosecute special study or research.

(2) To prepare a list of all persons so admitted (hereinafter referred to as Research Students).

(3) To make regulations for the supervision of their work.

(4) To satisfy themselves from time to time that the Research Students are carrying on their work in the University in a satisfactory manner.

(5) To suspend or exclude from any course any student whose conduct or progress is unsatisfactory.

III. Every applicant for admission must send in to the Senatus Academicus a written application stating any degree or other distinction which he has already obtained, the line of study or research which he wishes to prosecute and the probable period of its duration, together with evidence as to his character, capacity, and general qualifications.

IV. An application for admission is in the first instance referred by the Senatus to the appropriate Faculty, or to a Committee appointed by the Senatus; one member of the Committee shall always be a Professor or Lecturer within whose department the proposed line of study or research falls. No applicant shall be recommended by the Faculty or the Committee who has not satisfied them by examination or otherwise that he is qualified to prosecute the proposed line of study or research, and further—

(*a*) That his proposed line of study or research is a fit and proper one;

(*b*) That he possesses a good general education;

(*c*) That he is of good character;

(*d*) That he proposes to prosecute his studies or research during a period to be approved by the Senatus.

The Faculty or the Committee shall make a report to the Senatus upon each application. It is also their duty, subject to the regulations of the Senatus, to provide for the supervision of the Research Student's work, and to report at least once a year to the Senatus as to his progress and conduct. The Senatus shall then determine whether he shall remain a Research Student.

V. Every Research Student is required to matriculate each year, paying the ordinary fee.

VI. Research Students have access to and the use of the University Laboratories and Museums, under such conditions as to payment and otherwise as the University Court, after consultation with the Senatus, may determine.

VII. The title of Research Fellow may be conferred by the Senatus, with the approval of the University Court, on Research Students who have shown special distinction. Such title shall not of itself confer any right to stipend, but it shall be in the power of the University Court to provide a stipend of such amount and for such period as it may think

fit to any Research Fellow under the powers of Section XI., Sub-section 8, of Ordinance 27.

VIII. (1) The Research Fellows shall be appointed as aforesaid after consideration of the report or reports submitted in terms of Section IV. hereof.

(2) The title of Research Fellow may be conferred either at the commencement of the Research Student's course of study or research, or at any time during its progress, as the Senatus may determine.

(3) Research Fellows shall retain their title and stipend, if any, for the period during which they are engaged in special study or research in the University, and no longer.

(4) Research Students who have been appointed Research Fellows shall continue to be subject to the conditions above prescribed as to the supervision of their work and the reports to be made thereon.

IX. Nothing herein contained shall prejudice the right of Research Students to such Fellowships, Scholarships, or Prizes as may be open to them by Ordinance or Deed of Foundation.

X. The University Court may, subject to the provisions of Section XI., Sub-section 8, of Ordinance 27, provide such sums as it may think fit in aid of the expenses of Special Study or Research.

Regulations for Higher Degrees in Arts and Science. Degree of D.Sc.

I. Graduates who have taken the degree of Master of Arts in any Scottish University with first or second class honours in Mathematics and Natural Philosophy under the conditions prescribed by the Regulations for Degrees in Arts, or under the Regulations previously in force in such University, may offer themselves for the degree of Doctor of Science (D.Sc.) in the same University after the expiry of five years from the date of their graduation in Arts, under the same conditions as if they held the degree of Bachelor of Science.

II. Research Students within the meaning of the Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows may offer themselves for the degree of D.Sc. of the University in which they have prosecuted some special study or research under those Regulations, although they have not taken the degree of B.Sc. or the degree of M.A. with honours as aforesaid in that University; provided—

(1) That they hold the degree of B.Sc. or M.B. of a Scottish or any recognised University, or a degree of any such University, which the Senatus shall hold to be equivalent to the degree of B.Sc. or to the degree of M.A. with first or second class honours in Mathematics and Natural Philosophy; provided that candidates who hold any such degree from a University outside the United Kingdom may be required,

if the Senatus think fit, before beginning their course as Research Students with a view to the degree of D.Sc., to pass an examination equivalent to an Honours or to a Final Science examination in a group of subjects cognate to their line of work as Research Students.

(2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and that they produce evidence of satisfactory progress in the special study or research undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

III. All candidates for the degree of D.Sc. shall present a thesis or a published memoir or work,[1] to be approved by the Senatus on the recommendation of the Faculty of Science; provided that, if required by the Senatus, the candidate shall also be bound to pass such an examination conducted orally or practically, or by written papers, or by all of these methods, on the subjects of his special study or of his thesis, as may from time to time be determined. The thesis shall be a record of original research undertaken by the candidate, and shall be accompanied by a declaration signed by him that the work has been done and the thesis composed by himself.

Degree of D.Phil.

IV. Graduates who have taken the degree of M.A. in any Scottish University with first or second class honours in Mental Philosophy, under the conditions prescribed by Ordinance No. 11 [General No. 6—Regulations for Degrees in Arts], or under the Regulations previously in force in such University, may offer themselves for the degree of Doctor of Philosophy (D.Phil.) in the same University after the expiry of five years from the date of such graduation.

V. Research Students as aforesaid may offer themselves for the degree of D.Phil. of the University in which they have prosecuted some special study under Ordinance No. 61 [General, No. 23—Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows], although they have not taken the degree of M.A. with honours as aforesaid in that University; provided—

(1) That they hold the degree of M.A. with first or second class honours in Mental Philosophy of any Scottish University, or a degree of any recognised University, which the Senatus shall hold to be equivalent to such degree with honours as aforesaid; provided that candidates who hold such a degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students, with a view to the degree of D.Phil., to pass an examination equivalent to an honours examination in a group of subjects cognate to their line of work as Research Students.

[1] The Thesis must be lodged and the fees paid before 1st December.

(2) That they have spent no less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and produce evidence of satisfactory progress in the special study undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

VI. All candidates for the degree of D.Phil. shall present a thesis or a published memoir or work,[1] which shall be an original contribution to learning, to be approved by the Senatus on the recommendation of a Committee appointed by the Senatus; provided that, if required by the Senatus, a candidate shall also be bound to pass such examination, conducted orally or otherwise, on the subject of his thesis or of his special study as may from time to time be determined. The thesis, or memoir, or work shall be accompanied by a declaration signed by the candidate that it has been composed by himself. If the thesis has not already been published, it shall be published by the candidate in such manner as the Senatus shall approve.

Degree of D.Litt.

VII. Graduates who have taken the degree of M.A. in any Scottish University with first or second class honours in any group other than Mathematics and Natural Philosophy or Mental Philosophy, under the conditions prescribed by Ordinance No. 11 [General No. 6—Regulations for Degrees in Arts], or under the Regulations previously in force in such University, may offer themselves for the degree of Doctor of Letters (D.Litt.) in the same University after the expiry of five years from the date of such graduation.

VIII. Research Students as aforesaid may offer themselves for the degree of D.Litt. of the University in which they have prosecuted some special study under Ordinance No. 61 [General No. 23—Regulations for the Encouragement of Special Study and Research, and for the appointment of Research Fellows], although they have not taken the degree of M.A. with honours as aforesaid in that University; provided—

(1) That they hold the degree of M.A. with first or second class honours in any group except Mathematics and Natural Philosophy or Mental Philosophy of any Scottish University, or a degree of any recognised University, which the Senatus shall hold to be equivalent to such degree with honours as aforesaid; provided that candidates who hold such a degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students with a view to the degree of D.Litt., to pass an examination equivalent to an honours examination in a group of subjects cognate to their line of work as Research Students.

(2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the

[1] See footnote 1, p. 118.

degree, and produce evidence of satisfactory progress in the special study undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

IX. All candidates for the degree of D.Litt. shall present a thesis or a published memoir or work,[1] which shall be an original contribution to learning, to be approved by the Senatus on the recommendation of a Committee appointed by the Senatus; provided that, if required by the Senatus, a candidate shall also be bound to pass such examination, conducted orally or otherwise, on the subject of his thesis or of his special study as may from time to time be determined. The thesis, or memoir, or work shall be accompanied by a declaration signed by the candidate that it has been composed by himself. If the thesis has not already been published, it shall be published by the candidate in such manner as the Senatus shall approve.

General.

X. Notwithstanding and in supplement of the Regulations as to Examinations, sections XIV. and XV., the Senatus Academicus in each University shall appoint such Professors or Lecturers as it may think suitable to conduct the examination of candidates who may offer themselves under the Regulations for Degrees in Science, or of these Regulations for the Degree of Doctor of Science, Doctor of Philosophy, or Doctor of Letters; and the University Court shall, after consultation with the Senatus Academicus, appoint an additional Examiner to act along with them. Such additional Examiner shall be a person of recognised eminence in the subject of the thesis, or memoir, or work which is to be submitted for approval. The result of the examination shall be reported to the appropriate Faculty or Committee of Senatus.

XI. The degrees of D.Sc. in Mental Science or D.Sc. in Philology shall no longer be conferred by any Scottish University.

XII. Candidates who have already completed the necessary attendance on classes required for the degree of D.Sc. in Mental Science or D.Sc. in Philology, under regulations hitherto in force in any Scottish University, may proceed to the degree of D.Phil., or of D.Litt., as the case may be, under this Ordinance:—provided such candidates comply with the provisions of Section VI. or Section IX. hereof, as the case may be, and that a period of not less than five years shall have elapsed from the date of their graduation as M.A.

XIII. The degrees of D.Sc., D.Phil., and D.Litt. shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

The fee to be paid for Examination for each of the degrees of D.Sc.,

[1] See footnote 1, p. 118.

D.Phil., and D.Litt. is ten guineas, payable when the thesis is lodged,[1] and the fee for each re-examination for each of the Degrees is £5, 5s.[1]

Candidates for Examination or Graduation must pay the Matriculation fee of £1, 1s.[1] Candidates for Graduation are required to enter their names and (if not previously registered) to pay the Registration fee ten days before the date of the Graduation Ceremonial.

Time-Tables of Examinations and Dates for Presenting Certificates and for Payment of Fees.

Candidates are required to enter for each periodical Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.

The dates of the Examinations for 1899-1900 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination.

Preliminary Examination.

The Preliminary Examinations are held in the Examination Hall in the University, in autumn and spring.

Each Candidate must pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

Candidates may obtain Schedules at the Matriculation Office, University (Old) Buildings, on and after 8th September 1899, and on and after 15th February 1900. The Schedules must be completed and lodged, along with the fees, not later than 19th September 1899 and 1st March 1900 for the autumn and spring Examinations respectively.

Candidates may pay the fees personally or transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, but not by cheques on private accounts. When names are not entered and fees paid, or a Pass to the Examination obtained where the fee has been previously paid, on or before the stated dates, an additional or late-entry fee of 10s. must be paid before the Candidate can be admitted to the Examination. This fee will not be received after Twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his name and pay the fee, or, when the fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear. A Candidate is not held to be entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

[1] See footnote 1, page 118.

TIME-TABLES FOR PRELIMINARY EXAMINATIONS FOR ARTS, SCIENCE AND MEDICINE, AND FOR BURSARY EXAMINATIONS, 1899-1900.

		Medical Preliminary Examinations.	Arts, Science, Law (B.L.), and Music Preliminary Examinations and Bursary Examinations.
1899.			
Sept. 29	Fri.	... ...	Additional English for Bursaries,[1] 9-12 Italian,[1 4] 2-5
,, 30	Sat.	English, 9-12 Greek, 3-6 Do.,[2] 3-5	English,[1 3 4] 9-11, 12-2 Lower Greek,[3 4] 3-6 Anglo-Saxon, for Patterson Bursary, 9-12, 2-5
Oct. 2	Mon.	Latin, 9-12 Mathematics, 2-5	Lower Latin,[3 4] 9-12 Lower Mathematics,[3 4] 2-5
,, 3	Tu.	French, 3-6 Do.,[2] 3-5	Higher Latin,[1] 9-11, 12-2 Latin for Second and Third Year Bursaries, 9-12 French, 1st paper,[1 4] 3-4.30
,, 4	Wed.	German, 3-6 Do.,[2] 3-5	Higher Greek,[1] 9-11, 12-2 Greek for Second and Third Year Bursaries, 2.30-5.30 German, 1st paper,[1 4] 3-4.30
,, 5	Thur.	Higher Mathematics,[2] 9-11, 12-2	Intermediate and Higher Mathematics, and Mathematics for First, Second, and Third Year Bursaries,[1] 9-11, 12-2 French, 2nd paper,[1 4] 3-5
,, 6	Fri.	Moral Philosophy,[2] 9-11 Mechanics,[2] 1-4	German, 2nd paper,[1 4] 9-11 Dynamics,[1] 1-4 Logic and Psychology for Third Year Bursaries, 1-4

[1] Papers for the University Ordinary First Year Bursary Examination, for the Heriot University Bursaries both for men and for women, for the Heriot St George's Training College Bursaries for Graduates, and for the Bursaries offered by the Edinburgh Association for the University Education of Women.

The Papers for the Heriot University Bursaries for Women Students of Medicine, and for the St George's Training College Bursaries for non-Graduates, are the Preliminary Examination Papers pure and simple: candidates for these Bursaries as such are not required to take any of the additional Bursary Papers.

[2] For Students under the Old Regulations.

[3] Papers for the Preferential Bursary Examination.

[4] Papers for Music Preliminary: for Italian for Music Preliminary half-an-hour more will be allowed.

		Medical Preliminary Examinations.	Arts, Science, Law (B.L.), and Music Preliminary Examinations and Bursary Examinations.
1899.			
Oct. 7	Sat.	Natural Philosophy,[2] 9-11 Logic,[2] 2-4	Elementary Physics,[3] 9-11 Logic,[3] 2-4 Additional Latin and Greek for Ordinary Bursaries,[1] 9-12 Classics for Second and Third Year Bursaries, 9-12 Additional Mathematics for Ordinary Bursaries, and for Second and Third Year Bursaries,[1] 2-5
,, 9	Mon.	... ...	Sanskrit, Hebrew, Arabic, Syriac, Celtic. (See § IV. (3) of Regulations).—9-12 Higher Geometry for John Welsh Bursaries and for Kelland Prize, 9-12 Gaelic for Mackinnon and Ardvorlich [4] Bursaries, 9-12 Chemistry (Baxter of Balgavies Bursary), 9-11 [4] Additional French for Ordinary Bursaries,[1] 2-3.30 Do. German do.,[1] 3.30-5
,, 13	Fri.	MEETING OF JOINT BOARD } At 10 A.M.	
,, 14	Sat.	MEETING OF JOINT BOARD } each day.	
,, 17	Tu.	CLASSES OPEN.	
1900.			
Mar. 23	Fri.	... ...	Italian,[3] 2-5
,, 24	Sat.	English, 9-12 Greek, 3-6 Do.,[2] 3-5	English,[3] 9-11, 12-2 Lower Greek,[3] 3-6
,, 26	Mon.	Latin, 9-12 Mathematics, 2-5	Lower Latin,[3] 9-12 Lower Mathematics,[3] 2-5
,, 27	Tu.	French, 3-6 Do.,[2] 3-5	Higher Latin, 9-11, 12-2 French, 1st paper,[3] 3-4.30

[1] Papers for the University Ordinary First Year Bursary Examination, for the Heriot University Bursaries both for men and for women, for the Heriot St George's Training College Bursaries for Graduates, and for the Bursaries offered by the Edinburgh Association for the University Education of Women.

The Papers for the Heriot University Bursaries for Women Students of Medicine, and for the St George's Training College Bursaries for non-Graduates, are the Preliminary Examination Papers pure and simple: candidates for these Bursaries as such are not required to take any of the additional Bursary Papers.

[2] For Students under the Old Regulations.

[3] Papers for Music Preliminary.

[4] Not open in 1899.

		Medical Preliminary Examinations.	Arts, Science, Law (B.L.), and Music Preliminary Examinations and Bursary Examinations.
1900.			
Mar. 28	Wed.	German, 3-6	Higher Greek, 9-11, 12-2
		Do.,[1] 3-5	German, 1st paper,[2] 3-4.30
,, 29	Thur.	Higher Mathematics,[1] 9-11, 12-2	Intermediate and Higher Mathematics, 9-11, 12-2
			French, 2nd paper,[2] 3-5
,, 30	Fri.	Moral Philosophy,[1] 9-11	German, 2nd paper,[2] 9-11
		Mechanics,[1] 1-4	Dynamics, 1-4
,, 31	Sat.	Natural Philosophy,[1] 9-11	Elementary Physics,[2] 9-11
		Logic,[1] 2-4	Logic,[2] 2-4
Apr. 6	Fri.	MEETING OF JOINT BOARD } At 10 A.M.	
,, 7	Sat.	MEETING OF JOINT BOARD } each day.	

FEES FOR DEGREE OF M.A.

Candidates for the Ordinary Degree pay for each of the subjects of Astronomy, Chemistry, Zoology, Botany, or Geology £1, 1s., and for each of the other subjects 15s.

Those who fail in the Examinations pay 10s. 6d. for re-examination in each subject.

Candidates for the Degree, with Honours, pay the same total fees as for the Ordinary Degree.

DEGREE EXAMINATIONS.[3]

Candidates are required to enter for each periodical Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.

Candidates may obtain Schedules at the Matriculation Office. Schedules must be lodged, Certificates shown, and Fees paid as follows :—

[1] For Students under the Old Regulations.

[2] Music Preliminary: for Italian for Music Preliminary half-an-hour more will be allowed.

[3] When names are not entered and fees paid, or a Pass to the Examination obtained where the fee has been previously paid, on or before the stated dates, an additional or late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. This fee will not be received after twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his Name and pay the Fee, or, when the Fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear.

1. For the Examinations in October 1899, *not later than 4th October.*[1]

2. For the Examinations in Spring of 1900 Schedules must be lodged[1] and Fees paid *not later than 2nd March*, and the Matriculation Tickets and Class Certificates must be shown as follows:—For the Examinations in March at least *two clear days before* the date of the Examination in each subject; for the Examinations in April, *not later than 30th March.*

3. For the Examinations in Chemistry, Zoology, Botany, and Geology in Summer 1900, Schedules must be lodged and Fees paid *not later than 6th July*, and Certificates shown on *Friday, 19th July.*

When the Candidate has exhibited his Matriculation Tickets and the Certificates for Examination, the Clerk will stamp on the Receipt for the Fee the words, "Certificates examined," which entitle the Candidate to admission to the Examination Hall.

Candidates for Examination or for Graduation must be Matriculated Students of the Academic year.

Every Candidate for Graduation must produce certificates of having passed the necessary Examinations and pay the Fee of £1 for Registration as a Member of the General Council *at least one clear day before the date of Graduation.*[2]

The fees for Matriculation, Examinations for Degrees, and Registration of Graduates as Members of the General Council, are payable at the Matriculation Office, University. Candidates may pay the fees personally, or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed "*Union Bank of Scotland (Hunter Square Branch), Edinburgh*," but not by cheques on private accounts.

Degrees are conferred by the Chancellor or the Vice-Chancellor of the University. They are not conferred *in absentia*, except on very special cause shown. Candidates must appear in Academic costume, with the appropriate hood.[3]

[1] Candidates for Special Examination in Greek for Honours in Mental Philosophy must enter their names, and state which dialogue of Plato they offer, one month before the date of the examination.

[2] See footnote 3, page 124.

[3] Black silk lined with *white*.

TIME-TABLES FOR M.A. EXAMINATIONS FOR 1899 1900.

		M.A. Examinations.[1]	M.A. Honours Examinations.[1]
1899.			
Oct. 10	Tu.	English, 9-11, 11.30-1.30 Latin, 2.30-4.30	
,, 11	Wed.	Latin, 9-11 Greek, 11.30-1.30[2], 2.30-4.30	
,, 12	Th.	Mathematics, 9-11, 11.30-1.30 Natural Philosophy, 2.30-4.30	
,, 13	Fri.	Natural Philosophy, 9-11 Logic, 11.30-1.30, 2.30-4.30	
,, 14	Sat.	Moral Philosophy, 9-11, 11.30-1.30 History, 2-4	
,, 16	Mon.	History, 9-11 French, 11.30-1.30, 2-4	
,, 17	Tu.	CLASSES OPEN German, 9-11, 11.30-1.30 Essay, 2-3 French Essay, 3-4	
,, 30	Mon.	Education, 9-11 (M.A. & Diploma) Constitutional Law & History, 2-4	
,, 31	Tu.	Education, 9-11 (M.A. & Diploma); (Diploma) 11.30-1.30 Roman Law, 9-1 Constitutional Law & History, 2-4	
Nov. 2	Th.	Philosophy of Law, 9-11 Public International Law, 11.30-1.30 Political Economy, 2-4	
,, 3	Fri.	Political Economy, 9-11	
1900.			
Mar. 19	Mon.	Constitutional Law & History, 2-4	
,, 20	Tu.	Roman Law, 9-1 Constitutional Law & History, 2-4	
,, 22	Th.	Philosophy of Law, 9-11 Public International Law, 11.30-1.30 Sanskrit, 9-11, 11.30-1.30 Arabic and Syriac, 2.30-4.30	

NOTE.—In the Examinations for the Degree of M.A. in Roman Law, Public Law, and Constitutional Law and History, candidates who intend to proceed later to the Degree of LL.B. must pass on the LL.B. standard.

[1] It is impossible to avoid clashing between the hours of Examinations in the Pass subjects and in the Honours and the Scholarship subjects. Candidates should carefully consider early in their Curriculum the arrangements for these Examinations, in order, as far as possible, to avoid clashing.

[2] Also for Candidates for Honours in Mental Philosophy who have not included Greek as a Subject in the Examinations for the ordinary Degree of M.A.

		M.A. Examinations.[1]	M.A. Honours Examinations.[1]
1900.			
Mar. 22	Th.	Political Economy, 2-4	
,, 23	Fri.	Political Economy, 9-11	
,, 24	Sat.	Practical Chemistry, at hours to be announced (also on subsequent days if necessary).	
		Arabic and Syriac, 9-11	
,, 26	Mon.	Chemistry, 10-12	
		Geology, 1-3	
		Oral Examinations in Science Subjects may begin	
,, 27	Tu.	Botany, 10-12	
		Zoology, 1-3	
,, 28	Wed.	Celtic, 9-11, 11.30-1.30	Political Economy, 9-12, 2-5
		Hebrew, 2.30-4.30	
,, 29	Th.	Hebrew, 9-11	Political Economy, 9-12
		Astronomy, 11.30-1.30, 2.30-4.30	
,, 30	Fri.	Education (M.A. and Diploma) 9-11, 11.30-1.30	English, 9-12, 2-5
		Archæology and Art, 3-5	Constitutional History, 9-12, 2-5
,, 31	Sat.	Archæology and Art, 9-11	English, 9-12, 2-5
		English, 11.30-1.30, 2-4	Constit. History, 9-12, 2-5
		Educn. Sch'lmr's Diploma, 9-11	Classics (Optional Subjects), 9-12, 2-5
Apr. 2	Mon.	Logic, 9-11	English, 9-12, 2-5
		History, 12-2, 3-5	Classics, 9-12, 2-5
			Modern Languages, 9-12, 2-5
			Logic, 9-12, 2-5
			Pure Mathematics, 9-12, 2-5
			History, 9-12, 2-5
,, 3	Tu.	Latin, 9-11, 11.30-1.30	English, 9-12; (Hist.), 2-5
		Logic, 3-5	Classics, 9-12, 2-5
			Modern Langs., 9-12, 2-5
			Logic, 9-12
			Moral Philosophy, 2-5
			Pure Mathematics, 9-12
			Natural Philosophy, 2-5
			History, 9-12, 2-5

[1] The order of the papers set at the particular hours fixed for the general Honours Subjects, within any department or group, may be varied at the discretion of the Examiners. See footnote 1, page 126.

			M.A. Examinations.[1]	M.A. Honours Examinations.[1]
1900.				
Apr.	4	Wed.	Greek, 9-11,[2] 11.30-1.30 Mathematics, 3-5	Classics, 9-12, 2-5 Modern Languages, 9-12, 2-5 Moral Philosophy, 9-12, 2-5 Natural Philosophy, 9-12, 2-5 History of Art, 9-12, 2-5
,,	5	Th.	Mathematics, 9-11 Moral Philosophy, 11.30-1.30, 3-5	Classics, 9-12, 2-5 Modern Languages, 9-12
,,	6	Fri.	Natural Philosophy, 9-11, 11.30-1.30	
,,	7	Sat.	French, 9-11, 11.30-1.30 Essay, 2-3	
,,	9	Mon.	German, 9-11, 11.30-1.30 Essay, 2-3	
,,	11	Wed.	MEETING OF M.A. EXAMINERS FOR OLD SUBJECTS.	
,,	14	Sat.	GRADUATION COMMEMORATION	CEREMONIAL at 10 A.M. SERVICE at 12 noon.
July	21	Sat.	Practical Chemistry, at hours to be afterwards announced (also on following days if necessary).	
,,	23	Mon.	Chemistry, 10-12 Geology, 1-3 Oral Examinations in Science Subjects may begin	
,,	24	Tu.	Botany, 10-12 Zoology, 1-3	

PASS EXAMINATIONS FOR MASTER OF ARTS.

(See Time-Tables, Pages 126-128.)

The subjects for the Examinations for the Ordinary Degree October 1899 and March-April 1900 are as follows :—

I.—DEPARTMENT OF LANGUAGE AND LITERATURE.

1. *Latin for October* 1899 *and April* 1900.

Plautus, *Captivi*—Virgil, *Georgics*, ii.—Horace, *Epistles* i. ; *Odes*, iii. 1-6 ; and *Carmen Saeculare*—Cicero, *De Officiis*, iii.—Tacitus, *Annals*, ii.

[1] See footnote 1, page 127. See also footnote 1, page 126.
[2] See footnote 2, page 126.

Translation from an Author or Authors not prescribed. Latin prose composition.

Roman History.—A general knowledge of Roman History from 300 B.C. to the death of Tiberius, and a special knowledge of the period from 70 B.C. to the death of Tiberius.

Roman Literature.—A general knowledge of the course of Roman Literature to the death of Trajan, and a special knowledge of the Lives and Works of Plautus, Virgil, Horace, Cicero, and Tacitus.

Every Candidate is required to satisfy the Examiners in translating English into Latin prose.

2. *Greek for October* 1899 *and April* 1900.

Homer, *Odyssey*, ix.—Aristophanes, *Nubes*—Plato, *Republic*, iv.—Demosthenes, *Leptines*. Translation from an Author or Authors not prescribed. Greek prose composition.

Greek History.—A general knowledge of Greek History to the death of Alexander, and a more special knowledge of the period of the Persian Wars.

Greek Literature.—A general knowledge of Greek Literature to the end of the 4th cent. B.C., and a more special knowledge of the prescribed Authors.

Laws of Hexameter and Iambic verse.

3. *English for October* 1899 *and for April and October* 1900.

The Principles of English Composition and Style: Class Lectures. History of the English Language: The First Five Chapters of Morris's "Historical Outlines of English Accidence." History of English Literature: Lectures, with the Professor's "Short History of English Literature," and the portions of Hallam's "Literature of Europe" that relate to English writers.

Special Books for October 1899—Shakespeare, *Antony and Cleopatra* and *The Merchant of Venice*—Chaucer, *Nun's Priest's Tale*—Spenser, *Faerie Queene*, Book v.—Milton, *Areopagitica* and *Paradise Lost*, Book i.—Addison, *Selected Essays*—Pope, *Essay on Criticism*—Gray, *Poems*—Keats, *Poems*—Browning, *Selected Poems*.

Special Books for April and October 1900—Shakespeare, *Tempest* and *Much Ado About Nothing*—Chaucer, *Prioress's Tale* and *Sir Thopas*—Spenser, *Faerie Queene*, Book i.—Milton, Poems before *Comus*—Dryden, *Essay of Dramatic Poesy*—Swift, *Battle of the Books*—Collins, *Poems*—Landor, *Selections*—Tennyson, *The Princess*.

4. *French for October* 1899 *and April and October* 1900.

French for October 1899.—Corneille, *Cinna*, *Polyeucte*—Molière, *Misanthrope*, *Femmes Savantes*—Racine, *Britannicus*, *Phèdre*, *Athalie*—Mignet, *Révolution Française*—V. Hugo, *Extraits*—Clédat, *Morceaux choisis des Auteurs du Moyen-Age*—Rousseau, *Extraits*—Pascal, *Pensées*.

French for April and October 1900.—Corneille, *Cinna*, *Polyeucte*—Molière, *Misanthrope*, *Femmes Savantes*—Racine, *Britannicus*, *Phèdre*,

Athalie—V. Hugo, *Extraits*—Clédat, *Morceaux choisis des Auteurs du Moyen-Age*—Taine, *Extraits*—Pascal, *Pensées*—Faguet, *18e Siècle*—Lanson, *Littérature*—Montaigne, *Essais*—Rambaud, *Civilisation Contemporaine.*

Passages from French Authors not prescribed. French prose composition. A general knowledge of the development of the French language. A general knowledge of French history, and of the history of French Literature, with a more minute knowledge of the period 1680-1780.

Every Candidate is required to satisfy the Examiners in translating English into French prose.

5. *German for October* 1899.

G. Klee, *Die deutschen Heldensagen*, ed. Wolstenholme (Pitt Press). *Walther von der Vogelweide*, ed. Günther (Göschen). *Luther*, Auswahl Kleiner Prosaschriften, ed. Schöppa (Velhagen). *Kunst-und Volkslied* in der Reformationszeit, ed. Kinzel. Lessing, *Philotas*, ed. Günther (Göschen). Wieland, *Oberon*, ed. Hanke (Graeser). Voss, *Homer's Ilias*, ed. Primozic (Graeser). Goethe, *Aus meinem Leben*, Buch. xi.-xiv. (Cotta). Goethe, *Egmont*, ed. Blume (Graeser). Schiller, *Wallensteins Tod*, ed. Breul (Pitt Press). Schiller, *Abfall der Niederlande* (Cotta). Kleist, *Kathchen von Heilbronn*, ed. Lichtenheid (Gräser). Uhland, *Gedichte* (Cotta). Willibald Alexis, *Die Hosen des Herrn von Bredow.*

German for April 1900.

Hartmann von Aue, ed. J. G. Robertson—*Brant*, *Luther*, *Sachs*, *Fischart*, ed. Pariser (Göschen)—*Deutsche Heldensage*, Jiriczek (Göschen)—*Das deutsche Volkslied*, ed. Matthias (Velhagen)—Schiller, *Tell*, ed. Breul (Pitt Press)—Schiller, *Gedichte*, ed. Mayr (Graeser)—Goethe, *Hermann und Dorothea*, ed. Wagner (Pitt Press)—*Briefwechsel Schillers und Goethes*, ed. J. G. Robertson—Hauff, *Lichtenstein*, ed. Seidel, *Lichtenstein*—P. K. Rosegger, *Mein Weltleben*. Elster—*Zwischen den Schlachten*, ed. Hirsch (Macmillan)—R. Kleinpaul, *Das Fremdwort im Deutschen* (Göschen).

Passages from German Authors not prescribed. German prose composition. A general knowledge of the development of the language. A general knowledge of German History, and of the History of German Literature, with a more minute knowledge of the Authors prescribed and of the period 1740-1830.

Every Candidate is required to satisfy the Examiners in translating from and into German.

6. *Sanskrit and Comparative Philology.*

Hitopadeśa (Johnson's ed., 1847), book ii. — Nalopākhyānam (Bühler's ed.), cantos 1-12—Sanskrit Grammar—Sanskrit prose composition.

A general knowledge of the course of Sanskrit Literature.

7. *Semitic Languages.*

Hebrew.—1. Questions in Grammar. 2. Translation into Hebrew Prose. 3. Exodus (chaps. i.-xx.). Kings, books 1 and 2. Nahum, Zephaniah, Habukkuk. 4. *Jewish History* from B.C. 1010-598.

Syriac.—1. Questions in Grammar. 2. Translation into Syriac Prose. 3. Sections i., iii., ix., xii., xiv. of Rœdiger's *Chrestomathia Syriaca* (ed. 1892); *Book of Acts* in the Peshitta Version. 4. History of the Syriac Versions of the Scriptures in detail (Wright's *Short History of Syriac Literature*, pp. 1-107).

Arabic.—1. Questions in Grammar. 2. Translation into Arabic Prose. 3. Bruennow's *Chrestomathy of Arabic Prose Pieces*, pp. 1-22, 44-55; *The Kor'an*, Súra iii.; short passage of unseen prose to translate into English; 4. *Arabian History.*—Sir W. Muir's *The Caliphate:* its Rise, Decline, and Fall.—Chapters 1-45 and 64-67.

8. *Celtic.*

Modern Gaelic (Scottish and Irish)—Fingal, books i.-iii.; Macintyre's Poems, *or* Keating's Three Shafts of Death.

Old Gaelic.—Fled Brierend (Windisch's Irische Texte).

Passages in Old and Modern Gaelic (both Scottish and Irish) from Authors not prescribed.

Translation from English into Gaelic Prose (Scottish *or* Irish).

History and Literature.—The History and Literature of the Scottish Highlands (1560 to present day).

II.—Department of Mental Philosophy.

1. *Logic and Psychology.*

The elementary doctrines of Logic and Psychology; and the History of Philosophy so far as treated in the Class Lectures.—Locke's *Essay*, Book ii., Chapters 1-12, and Chapter 23; Professor Fraser's "*Selections from Berkeley*"—"Editor's Introduction," "Principles of Human Knowledge" (sect. 1-84 and 135-156), "Visual Language: a Dialogue"; Hume's *Enquiry concerning Human Understanding*.—Sections 1-7 inclusive.

2. *Moral Philosophy.*

Professor's "Ethical Principles"; Butler "On Human Nature"; Mill's "Utilitarianism"; Spencer's "Data of Ethics"; Sidgwick's "Outlines of the History of Ethics,"

3. *Commercial and Political Economy.*

The subjects of examination are: The Lectures of the Professor; Mill's *Principles of Political Economy*, Books i.-iii.; Marshall's *Economics of Industry* (*new edition*); Adam Smith's *Wealth of Nations*, Book iv.; Professor Nicholson's *Money and Monetary Problems* (4th edition), *The Treatise on Money.*

4. *Theory, Art, and History of Education.*

Theory and Art.—Subjects of examination: Lectures of the Professor; *Locke's Thoughts* (parts which deal with moral training); *Locke on the Conduct of the Understanding*; *Language and Linguistic Method in the School, by Professor Laurie* (2nd edition); *Comenius' Great Didactic*, as in "*The Educational Life and Writings of Comenius*" *by Professor Laurie.*

The Theory or Science of Education comprises the Psychology and Ethics in Laurie's "*Institutes of Education.*"

History.—A general knowledge of Bacon, Ratke, Rousseau, and Pestalozzi, as in Compayré's Manual, or Quick's Educational Biographies.

5. *Philosophy of Law.*

(*See under* "*Public Law*" *in Department of History and Law.*)

III.—Department of Science.

1. *Mathematics.*

Arithmetic.—Euclid, Books i., ii., iii., iv., vi., and xi., or their equivalent, with their application to Mensuration.—Algebra, Trigonometry, Conic Sections, Geometrical and Analytical.

Candidates must show sufficient knowledge in each of these subjects.

2. *Natural Philosophy.*

Elementary Dynamics, Astronomy and Experimental Physics.

Candidates must show sufficient knowledge both of Dynamics and of Experimental Physics.

3. *Practical Astronomy.*

The Class Lectures.—Use of the Sextant, Transit-Circle, Wire and Ring Micrometers.—Young's General Astronomy; Main's Practical and Spherical Astronomy, or corresponding portions of Brünnow's or Chauvenet's Astronomy. Sir John Herschel's Outlines of Astronomy, omitting Part IV.

4. *Chemistry.*

Chemical changes as distinguished from physical changes. Elements; compounds; mixtures. Laws of chemical combination by weight and by volume. The atomic theory. Atoms; molecules. Avogadro's Hypothesis. Molecular weights of gaseous and volatile substances. Atomic weights. Law of Dulong and Petit. Chemical Notation—Symbols; formulæ; equations. Simple chemical calculations.

The non-metallic elements and their chief compounds; especially the compounds of oxygen, of hydrogen, and of chlorine, with the other non-metals. The more important inorganic acids. The atmosphere. Combustion. Oxidation and reduction.

The following metallic elements and their chief compounds; especially those with oxygen, with chlorine, and with sulphur: Gold, platinum, silver, mercury, lead, antimony, tin, copper, bismuth, zinc, iron, aluminium, chromium, manganese, barium, strontium, calcium, magnesium, potassium, sodium.

The following salts: the ammonium salts; the more important sulphates, sulphites, thiosulphates, nitrates, nitrites, carbonates, bromides, iodides, iodates, phosphates, borates, silicates.

The relations of bases, acids, and salts Electrolysis. Quantivalence. The periodic law.

The metallurgy of silver, mercury, copper, lead, tin, zinc, iron (including cast iron and steel). Alloys, such as brass, bronze, solder, type-metal. Amalgams.

The manufacture of aluminium, magnesium, potassium, sodium, glass, porcelain, mortar, gunpowder, sulphuric acid, sodium carbonate and bicarbonate, caustic soda, bleaching powder and chlorates, wrought-iron, steel, white lead.

Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform. Methyl and Ethyl Alcohols and Ethers. Substituted ammonias and ammonium salts. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Acetylene, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Distillation of Wood and of Coal. Benzene, Benzoic Acid, Phenol, Salicylic Acid, Oil of Bitter Almonds. Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea, Uric Acid.

Simple Qualitative Analysis. The examination in this is conducted practically. Candidates are required to examine unknown *single salts* for both metallic and salt radicals, as contained in the following lists:—

Silver, Mercurous, Mercuric, Cupric, Lead, Stannous, Stannic, Bismuth, Antimony (*Tartar Emetic* may be given), Arsenious, Zinc, Manganous, Ferrous, Ferric, Chromic, Aluminium, Calcium, Barium, Strontium, Magnesium, Ammonium, Sodium, Potassium.

Carbonate, Sulphite, Thiosulphate, Sulphide, Hypochlorite (Bleaching solution), Nitrite, Chloride, Bromide, Iodide, Cyanide, Sulphate, Chromate, Orthophosphate, Arseniate, Arsenite, Borate, Oxalate, Nitrate, Chlorate, Acetate.

At the examination, Candidates are supplied with the following reagents, &c.: Acetic Acid, dilute Hydrochloric Acid, dilute Nitric Acid, Sulphuric Acid, dilute Sulphuric Acid, Alcohol, Iodine, Ammonia, Ammonium Carbonate, Ammonium Chloride, Ammonium Oxalate, Ammonium Sulphide, Barium Nitrate, Bleaching Powder, Calcium Chloride, Calcium Hydrate, Calcium Sulphate, Cobaltous Nitrate, Cupric Sulphate, Ferric Chloride, Ferrous Sulphate, Lead Acetate, Magnesium Sulphate, Mercuric Chloride, Potassium Carbonate, Potassium Chromate, Potassium Ferricyanide, Potassium Ferrocyanide, Potassium Hydrate, Potassium Iodide, Silver Nitrate,

Sodium Bitartrate, Sodium Phosphate, Sodium Sulphite, Stannous Chloride, Sulphuretted Hydrogen. *Solids*—Manganese Dioxide, Sodium Carbonate, Borax, Sulphur, Zinc, Copper.

Test-papers:—Blue Litmus, Red Litmus, Plain, Starch, Turmeric.

Bunsen Burner, Test Tubes.

5. *Zoology.*

(*a*) The General Principles of Biology.

(*b*) The distinctive characters of the Invertebrate groups and the structure, habits, &c., of Amœba, Paramœcium, Hydra, Arenicola, Hirudo, Anodon, Helix, Nephrops, and Periplaneta.

(*c*) The distinctive characters of the Chordata groups and the structure, habits, &c., of Myxine, Raia, Clupea, Rana, Columba, Ornithorhynchus, Macropus, Lepus, Ovis, and Canis.

(*d*) The skeletons of Crocodilus, Equus, Felis catus, Balæna, Vespertilio, and Simia (Orang).

(*e*) A general knowledge of the orders of Sauropsida and Mammalia.

(*f*) The structure and life-history of Gregarina, Distoma, Tænia, Ascaris, Trichina, and Filaria.

(*g*) The more important facts of the development of Scyllium, Rana, Gallus, and Lepus.

(*h*) The principles of the Geographical Distribution of Animals, and the Distribution of the Mammalia.

In addition to the above subjects, Candidates will require to possess a general knowledge of Wallace's "Darwinism."

6. *Botany.*

The characteristic features of the following groups and classes of the vegetable kingdom:—

Thallophyta [Schizophyta, Algæ, Fungi]: Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts and principles of Morphology (including Anatomy, Histology, and Development) and Physiology.

The life-history of the following plants:—Bacterium, Nostoc, Spirogyra, Saccharomyces, Mucor, Vaucheria, Agaricus, Collema, Puccinia, Claviceps, Eurotium, Marchantia, Fucus, Polysiphonia, Funaria, Aspidium, Equisetum, Selaginella, Pinus, Cycas, Scilla, Capsella, Helianthus, Ulmus, Quercus.

The characters of plants belonging to the chief British natural orders of Phanerogamæ.

7. *Geology including Mineralogy.*

1. *Dynamical Geology.*—The nature and operation of geological agents:—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

2. *Mineralogy.*—Characters of the chief rock-forming minerals.

3. *Petrology.*—Megascopic and Microscopic Characters, Composition, Origin and Distribution of the more important Rocks.

4. *Structural Geology.*—Structure of Rock-masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

5. *Stratigraphical Geology.*—History of the Geological Systems of the British Islands.

6. *Palæontological Geology.*—Characters, and distribution in time, of the more important Genera and Orders found fossil in Britain.

7. *Physiographical Geology.*—Origin of the present outlines of the Earth's surface.

IV.—Department of History and Law.

1. *History.*

Subject of Examination for 1899-1900.

General British History, viz.:—(1) History of the British Isles from B.C. 55 to A.D. 1885, in outline; (2) The same from 1603 to 1689, in detail.

The Examiners will attach greater importance to a grasp of principles than to mere knowledge of details.

Books recommended:—(*a*) For the *General History*, Gardiner's "Student's History of England," Green's "Short History of the English People," Bright's "History of England," or Ransome's "Advanced History of England," Hume Brown's "History of Scotland," Morris' "History of Ireland." (*b*) For the *Special Period*, Gardiner, "Puritan Revolution" (Epoch Series); Hallam, "Constitutional History of England"; Harrison, "Oliver Cromwell"; Macaulay, "History of England"; Burton, "History of Scotland."

2. *Archaeology and Art* (*History of*).

The subjects for examination will be the Class lectures, the Professor's Manual "The Fine Arts," Conway's "Dawn of Art in the Ancient World," Tarbell's "History of Greek Art," Parker's "Introduction to Gothic Architecture," Poynter's "Classic and Italian Painting." Candidates will be expected to show some knowledge of the original authorities for the different periods of Art History.

3. *Constitutional Law and History.*

Subjects of examination: Constitutional History and Law of England, as treated of in the Lectures, and in the works of Stubbs, Hallam, and May; and that of the U.S. of America, of France, of Germany, and of Switzerland, as treated of in the Lectures, and in the works of Bancroft, Bryce, Adams and Cunningham, Dareste, Demombynes, &c.

4. *Roman Law.*

Subjects of examination: (1) The history of the law from the foundation of Rome to the time of Justinian, and (2) a general knowledge of the principles and doctrines of the Law. Maine's "Ancient

Law," and Muirhead's "Historical Introduction," are recommended for the historical part, and Justinian's Institutes, Bk. i. to Bk. iv., Tit. vi., must be professed for the doctrinal part.

5. *Public Law.*

I. The Philosophy of Law.

Green, Principles of Political Obligation; Ritchie, Natural Rights; Lorimer, Institutes of Law; Ahrens, Cour de Droit Naturel; Bluntschli, The Theory of the State. The Student's Austin; Holland, Jurisprudence; Pollock, First Book of Jurisprudence; Sir H. Maine's works.

II. Public International Law.

Wheaton's History of the Law of Nations, Nys's Les Origines du Droit International, Hall's International Law.

EXAMINATIONS FOR GRADUATION IN ARTS WITH HONOURS.

(*Examinations for Honours are held in March-April only.*)

(See Time-Table of Examinations, pp. 127, 128.)

I.—Classics.

N.B.—It should be understood that a general acquaintance with the Greek and Latin writers of the classical age will be expected from all candidates; and unseen passages from other than the prescribed authors will form an important part of the examination.

The subjects of Examination for the Degree of Master of Arts with Honours in April 1900 and 1901 are as follows:—

Latin for 1900.

Virgil—Persius—Juvenal (omitting satires ii., vi., and ix.) Remains of Early Roman Poetry, ed. Merry—Cicero's *Letters*, Watson's Selection, pt. iii.)—Cæsar, *De Bello Civili*, i.-iii.—Tacitus, *Annals*, i.-iv.

Latin prose composition. Translation from Authors not prescribed. Candidates may also offer Verse Composition.

Roman History.—A general knowledge of Roman History to 100 A.D., and a more special knowledge of the period from 100 B.C. to the death of Tiberius.

Roman Literature.—A general knowledge of the course of Roman

Literature, and a more minute knowledge of the Lives and Writings of the Authors prescribed.

1. *Latin for* 1901.

Horace — Plautus, *Rudens*, *Mostellaria* — Lucretius, i. — Lucan, Pharsalia, vii.—Cicero, *Consular Speeches*—Sallust, *Catiline*—Tacitus, *Annals*, xii.-xiv. and the *Dialogue De Oratoribus*.

Latin prose composition. Translation from Authors not prescribed. Candidates may also offer Verse Composition.

Roman History.—A general knowledge of Roman History to 100 A.D., and a more special knowledge of the period 70 B.C. to the Fall of Nero.

Roman Literature.—A general knowledge of the course of Roman Literature, and a more minute knowledge of the Lives and Writings of the Authors prescribed.

Greek for 1900.

Homer, *Iliad*, xiii.-xxiv.—Æschylus, *Agam.*, *Choeph.*—Thucydides, v., vi.—Aristotle, *Nicom. Ethics*, i.-iv. (inclusive) and x.

Greek prose composition—Translation from Authors not prescribed. Candidates may offer Verse Composition.

Greek History.—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian constitution (with special reference to Aristotle's *Constitution of Athens*).

Greek Literature.—A general knowledge of Greek Literature, and a more minute knowledge of the Authors prescribed.

Greek Grammar.—As a special subject, Monro's *Homeric Grammar* (the part relating to Homeric Syntax).

2. *Greek for* 1901.

Homer, *Odyssey*, i.-xii.—Bacchylides, *Odes*, v., vi., ix., xi., xvii., xviii.—Theocritus — Thucydides, vi., vii. Aristotle, *Nicom. Ethics*, i.-iv. (inclusive) and viii.-x. (inclusive).

Greek Prose Composition—Translation from Authors not prescribed. Candidates may offer Verse Composition.

Greek History.—A general knowledge of Greek History to the death of Alexander, and a more minute knowledge of the development of the Athenian constitution (with special reference to Aristotle's *Constitution of Athens*).

Greek Literature.—A general knowledge of Greek Literature, and a more minute knowledge of the Authors prescribed.

Greek Grammar.—As a special subject, Monro's *Homeric Grammar* (the part relating to Homeric Syntax).

Optional Subjects.

1. *Comparative Philology for* 1900 *and* 1901.

Candidates who take Comparative Philology as their optional subject for Graduation with Honours in Classics, will be examined in the following branches of Linguistic Science:—(*a*) Science of Language, including the history and general results of Linguistic research. (*b*) Principles of Indo-European Comparative Philology, with special reference to the Greek and Latin Languages. (*c*) Etymology of Greek and Latin.

Books recommended for private study:—(*a*) M. Muller, Lectures on the Science of Language. W. D. Whitney, Language and the Study of Language. B. Delbrück, Introduction to the Study of Language. (*b*) P. Giles, Short Manual of Comparative Philology.

Also recommended for reference:—King & Cookson, Principles of Sound and Inflexion. Brugmann & Stolz, Greek and Latin Grammar (Iwan Müller's Handbuch der Klassischen Alterthumswissenschaft, vol. i.). Blass, Pronunciation of Ancient Greek (Cambridge University Press). (*c*) Curtius, Principles of Greek Etymology, Book ii.

Classical Archæology for 1900.

1. The general history of the Arts of Form in Greece. To be studied in Overbeck's "Schriftquellen," and Murray's "Handbook of Greek Archæology."

2. The history of Greek Sculpture. To be studied in E. Gardner's "Handbook of Greek Sculpture" and Brunn-Bruckmann's Photographs.

Classical Archæology for 1901.

1. The general history of the Arts of Form in Greece. To be studied in Overbeck's "Schriftquellen" and Murray's "Handbook of Greek Archæology."

2. The history of Greek Sculpture. To be studied in E. Gardner's "Handbook of Greek Sculpture" and Brunn-Bruckmann's Photographs.

Ancient Philosophy for 1900 and 1901.

The Pre-Socratic Philosophy, with original authorities as quoted in Ritter and Preller, *Historia Philosophiae Graecae;* The Sophists and Socrates; Plato, *Theaetetus*, together with the outlines of the Platonic Philosophy.

Books recommended:—Zeller, *Pre-Socratic Philosophy*, vol. i. and ii. (Translation by Alleyne). Burnet, *Early Greek Philosophy*.

Or, as an alternative:

Plato, *Philebus*, together with the outlines of the Platonic Philosophy; the Psychology and Logic of Aristotle, with special reference to Aristotle, *De Anima*, and Trendelenburg's *Elementa Logices Aristoteleae*.

II.—Mental Philosophy.[1]

1. *Logic and Metaphysics for* 1899 *and* 1900.

A competent knowledge of the History of Philosophy and of the more advanced doctrines of Logic and Psychology, and a special knowledge of the following books :—

Plato, *Theaetetus*—Aristotle, *De Anima*—Spinoza, *Ethics*—Hume, *Treatise on Human Nature*, Book i. (Of the Understanding)—Kant, *Critique of Pure Reason*—Hegel's *Logic*, in Professor Wallace's translation, chapters i.-vi.—Lotze's *Metaphysics*, Book i. (Clarendon Press).

2. *Moral Philosophy for* 1900 *and* 1901.

A general knowledge of the history of ethical theory, and a more special knowledge of the following books :—

Plato, *Republic*—Aristotle, *Ethics* and *Politics*—Kant, *Theory of Ethics* (Abbott's trans.)—Hegel, *Philosophy of Right* (Dyde's trans.)—Sidgwick, *Methods of Ethics*—Green, *Prolegomena to Ethics* and *Principles of Political Obligation*—Spencer, *Principles of Ethics*.

III.—Mathematics and Natural Philosophy.

Pure Geometry, Algebra, Theory of Equations, including Determinants, Trigonometry (Plane and Spherical), Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. (The Candidate may, if he please, profess the Elements of Quaternion Analysis.)

Experimental Physics; Analytical Dynamics and Thermodynamics; *imperative*.

In addition, two or more branches of Elementary Mathematical Physics (such as Geometrical or Physical Optics, Statical or Voltaic Electricity, Capillarity, &c.). These may be selected by the Candidate.

Students who select special subjects should consult the Examiners regarding the scope of their examination, and the text-books which they should use.

IV.—English (Language, Literature, and British History).

1. Candidates for Honours in English must attend at least four complete courses of Lectures within their Honours group, viz.: (*a*) Not less than two Courses in English Literature, of which one at least must be an Honours Course; and (*b*) not less than two Courses—one of which at least must be an Honours Course—in the Subsidiary subjects, English Language and British History; or in either of them.

2. Every such candidate must be examined in all the three subjects mentioned in the Regulations, Section XI. (1) *f*.

[1] The special examination in Greek (see p. 111) will be held at the same time as the first paper of the M.A. Pass Examination in Greek, in October 1899 and April 1900 and will consist of (1) Passages for translation from Aristotle, *Nic. Ethics*, bk. i.; Plato, *Republic*, bk. vi. or vii.; (2) Easy passages for unseen translation from Xenophon, Plato, or Aristotle. Candidates must enter their names, and state which dialogue of Plato they offer, one month before the date of the examination.

3. *British History.*

One of those branches of British History which form the subjects of the Courses given by the Professors of History. Candidates to intimate the subject they select at the time of entering their names for Examination.

Subjects for 1900.

1. *Literature.*

1. Rhetoric and the Principles of Literature. Knowledge of the following required:—Aristotle's *Rhetoric* and *Poetics;* Quintilian's *Institutes*, especially Books ix. and x.; Longinus, *On the Sublime;* Dante, *De Vulgari Eloquio;* Jonson, *Discoveries;* Dryden, *Essay of Dramatic Poesy;* Johnson, *Lives of Cowley*, *Milton*, *Dryden*, *Pope*, and *Gray;* De Quincey's *Essay on Rhetoric;* Masson's *Essay on Milton's English and Versification* (in Edition of Milton); Guest's *English Rhythms;* Wordsworth's *Prose Prefaces;* Coleridge, *Biographia Literaria*, cap. xiv. to end; M. Arnold, *Essays in Criticism* (Preface and two first Essays, with Prefatory Essay to Ward's *Poets*).

2. History of English Literature. (1) *General. Books recommended:*—Ten Brink's *Early English Literature* (transl. by Kennedy); Stopford Brooke's *Early English Literature;* Ward's *English Dramatic Literature;* Saintsbury's *Short History of English Literature*, *Elizabethan Literature*, and *Nineteenth Century Literature;* Gosse's *Eighteenth Century Literature;* Ward's *English Poets;* Craik's *English Prose;* Irving's *History of Scottish Poetry.* (2) *Special.*—Literature from Chaucer to Skelton. Candidates are required to show thorough knowledge of the following:—Chaucer, *Prologue to Canterbury Tales* and *Troilus and Cressida;* Langland, *Piers Plowman*, A Text; Gower, *Confessio Amantis* (Morley's ed.); King James I., *The King's Quair;* Henryson, *The Testament of Cressid;* Dunbar, *Longer Poems;* Gavin Douglas, *Prologues to the Æneid;* Lydgate, Halliwell's *Minor Poems of;* Occleve, *Poems*, E.E.T.S., Vol. I.; Hawes, *The Pastime of Pleasure;* Skelton, *The Crowen of Laurel* and *Colin Clout;* Malory, *Morte d'Arthure* (Globe ed.); Berners, *Froissart* (Globe ed.).

3. The subjects of any other Honours Course in English Literature the Candidate may have attended.

Candidates will be required to write a Critical Essay on some subject arising out of Nos. 1, 2, or 3.

2. *Language.*

1. The History of Old and Middle English. *Text-books for reference.*—See Course on the History of Old and Middle English.

2. *Special Readings.—Beowulf* (ll. 1-1250): The Preface to King Alfred's Version of Gregory's *Pastoral Care;* Morris and Skeat's *Specimens*, I. and II., in illustration of O.E. and M.E. Dialects; the

prescribed books of Chaucer and Skelton ; *The Thrissil and the Rois ; The Complaynt of Scotlande.*

3. Unseen passages for translation into Modern English.

3. *British History.*

Those branches of British History which form the subjects of the Courses given by the Professors of History. Candidates to intimate the subjects they select at the time of entering their names for Examination.

Subjects for 1901.

1. *Literature.*

1. Rhetoric and the Principles of Literature. Knowledge of the following required :—Aristotle's *Rhetoric* and *Poetics ;* Quintilian's *Institutes*, especially Books ix. and x. ; Longinus, *On the Sublime ;* Dante, *De Vulgari Eloquio ;* Jonson, *Discoveries ;* Dryden, *Essay of Dramatic Poesy ;* Johnson, *Lives of Cowley*, *Milton*, *Dryden*, *Pope*, and *Gray ;* De Quincey's *Essay on Rhetoric ;* Masson's *Essay on Milton's English and Versification* (in Edition of Milton) ; Guest's *English Rhythms ;* Wordsworth's *Prose Prefaces ;* Coleridge, *Biographia Literaria*, cap. xiv. to end ; M. Arnold, *Essays in Criticism* (Preface and two first Essays, with Prefatory Essay to Ward's *Poets*).

2. History of English Literature. (1) *General.—Books recommended :*—Ten Brink's *Early English Literature* (transl. by Kennedy); Stopford Brooke's *Early English Literature ;* Ward's *English Dramatic Literature ;* Saintsbury's *Short History of English Literature*, *Elizabethan Literature* and *Nineteenth Century Literature ;* Gosse's *Eighteenth Century Literature ;* Ward's *English Poets ;* Craik's *English Prose ;* Irving's *History of Scottish Poetry.* (2) *Special.*—Literature of the Sixteenth Century. Candidates are expected to show a thorough knowledge of the following :—Ascham, *Toxophilus* and *Schoolmaster ;* Sackville, *Poems* and *Gorboduc ;* Gascoigne, *Steel Glass* and *Notes of Instruction ;* Marlowe, *Tamburlaine ;* Lyly, *Euphues ;* Spenser, *Shepherd's Kalendar*, *Faerie Queene*, i. and ii., and *Four Hymns ;* Sidney, *Astrophel Sonnets*, and *Apology for Poetry ;* Shakespeare, *Poems*, *Antony and Cleopatra*, *Hamlet*, *As you Like It ;* Bacon, *Essays ;* Alexander Scott, *Poems ;* Montgomerie, *The Cherry and The Slae.*

3. The subjects of any other Honours Course in English Literature the Candidate may have attended.

Candidates will be required to write a Critical Essay on some subject arising out of Nos. 1, 2, or 3.

2. *Language.*

1. The History of Old and Middle English. For Books recommended for reference see Course on the History of Old and Middle English.

2. *Special Readings.—Beowulf* (ll. 1251-1887) ; *The Wanderer ;* Wulfstan's Address to the English (Sweet's *A.-S. Reader*) ; Layamon.

Brut (MS. Cott. Calig.) ll. 13785-14387; *The Proverbs of Alfred* (in Morris's *Old English Miscellany*, E.E.T.S.); Chaucer, *Squieres Tale*; Henryson, *Testament of Cresseid*; Lyndsay, *The Monarche* (ll. 1-385); also Sweet, *A.-S. Reader*, Part II. (Archaic and Dialectal), and Morris and Skeat, *Specimens*, I. and II., in illustration of O.E. and M.E. Dialects.

3. Unseen passages for translation into Modern English.

3. *British History.*

Those branches of British History which form the subjects of the Courses given by the Professors of History. Candidates to intimate the subjects they select at the time of entering their names for Examination.

V.—Modern Languages and Literature.

French for 1900.

Corneille, *Chefs d'œuvre*—Molière, *Chefs d'œuvre*—Racine, *Chefs d'œuvre*—Montaigne, *Essais*—V. Hugo, *Année Terrible*—La Bruyère, *Caractères*—Faguet, *Politiques et Moralistes*—Lanson, *Littérature*—Rambaud, *Civilisation contemporaine.*

French Composition, *History*, *French Literature*, and *Romance Philology* as for 1899.

French History.—A general knowledge of French History, and a more minute knowledge of the period from 1789 to 1870.

French Literature.—A general knowledge of the history of French Literature, and a special knowledge of the period from 1802 to 1889.

Romance Philology.—The general principles of Romance Philology (Brachet, *Grammaire historique*; Bartsch, *La Littérature française jusqu'au* 14^{me} *siècle*; Brunot, *Grammaire historique*, 3rd ed.).

French for 1901.

Clédat, *Morceaux choisis du Moyen-Age*; Faguet, *Etudes sur le* 19^{me} *siècle*—Faguet, *Politiques et Moralistes au* 19^{me} *siècle*—Lanson, *Histoire de la Littérature française*—Taine, *Extraits*—Michelet, *Précis de la Révolution française*—V. Hugo, *Les Contemplations*—Saint-Victor, *Hommes et Dieux*—Pascal, *Pensées*—Rambaud, *Civilisation française.*

French Composition and Translation of unseen passages.

French History—A general knowledge of French History, and a more minute knowledge of the period from 1789 to 1870.

French Literature.—A general knowledge of the history of French Literature, and a special knowledge of the period from 1802 to 1889.

Romance Philology.—The general principles of Romance Philology (Brachet, *Grammaire historique*; Brunot, *Grammaire historique*, 3rd ed.).

German for 1900.

Deutsche Mythologie, F. Kauffmann (Göschen)—*Althochdeutsche Litteratur*, ed. Schauffler (Goschen)—*Der arme Heinrich*, Hartmann von Aue, ed. J. G. Robertson—*Reinke de Vos*, ed. F. Prien (Paul,

Altdeutsche Textbibl.)—*Hans Sachs*, Auswahl, ed. K. Kinzel—Grimmelshausen, *Simplicissimus*, ed. G. Klee (Velhagen)—*Das deutsche Volkslied*, ed. A. Matthias (Velhagen)—*Herder*, Kleinere Prosaschriften, ed. R. Franz (Velhagen)—Schiller, *Anmut und Würde*—Schiller, *die Räuber*, ed. T. Neubauer (Graeser)—Goethe, *Aus meinem Leben*, Buch xv.-xx. (Cotta)—Goethe, *Torquato Tasso*, ed. T. Neubauer (Graeser)—*Holderlin*, Gedichte (Cotta)—J. Paul Richter, *Schulmeisterlein Maria Wutz*—Spielhagen, *Quisisana*—H. v. Stein, *Goethe und Schiller* (Reclam)—Reuter, *Hanne Nüte* (Volksausgabe).

German History.—A general knowledge of German History, and a more minute knowledge of the period from 1700 to 1820.

German Literature.—A general knowledge of German Literature, and a special knowledge of the authors prescribed and of the period from 1740 to 1832 (Scherer, *History of German Literature*; Kluge, *National-Litteratur*).

Teutonic Philology.—The general principles of Teutonic Philology, and a more intimate knowledge of Modern German Etymology (Duden, *Etymologie des Neuhochdeutschen*; O. Weise, *Muttersprache*).

Prose composition. Translation from authors not prescribed.

German for 1901.

Gotische Sprachdenkmäler, ed. Jantzen (Göschen)—*Althochdeutsche Litteratur*, ed. Schauffler (Göschen)—*Deutsche Mythologie*, Kauffmann (Göschen)—*Deutsche Kulturgeschichte*, Günther (Göschen)—*Walter von der Vogelweide*, ed. Paul (Altdeutsche Textbibl.)—*Brant und Fischart*, ed. Voigt (Velhagen u. Klasing)—Herder, *Von deutscher Art und Kunst*, ed. Lambel (Deutsche Litt. Denkmäler)—Winckelmann, *Gedanken über die Nachahmung* (Deutsche Litt. Denkm.)—Lessing, *Laokoon*, ed. Jauker (Gräser)—Schiller, *Braut von Messina* (Gräser)—Schiller, *Naive und sentimentalische Dichtung* (Gräser)—Goethe, *Elegien* (Cotta, Bd. I.)—Lenau, *Gedichte* (Gräser)—Heine, *Buch der Lieder* (Hoffmann u. Campe)—Scheffel, *Trompeter*—Neubauer, *Freiherr von Stein* (Führende Geister)—Stifter, *Bunte Steine*—F. Reuter, *Extracts from Läuschen und Rimels*—P. K. Rosegger, *Stoansteirisch*.

Prose Composition. Translation from authors not prescribed.

German History.—A general knowledge of German History, and a more intimate knowledge of the period from 1700 to 1820.

German Literature.—A general knowledge of German Literature, and a special knowledge of the authors prescribed and of the period from 1740 to 1832 (Scherer, *History of German Literature*; Kluge, *National-Litteratur*).

Teutonic Philology.—The general principles of Teutonic Philology, and a more intimate knowledge of Modern German Etymology.

VI.—History.

Candidates for Honours in History must attend two Classes (one at least of which must be an Honours Class) in each of their Honours Subjects.

The Honours subjects at present recognised are (1) Modern History, (2) Constitutional History, and (3) History of Art. For the Ordinary and the Honours Courses, see pages 98 to 102.

I. Under the head of *Modern History* four papers will be set.

Subjects for 1900.

(1) General survey of British History, from B.C. 55 to A.D. 1885, with special attention to the period A.D. 1603-1689. Some knowledge of books on the special period will be required.

(2) "England, Scotland, and France at the close of the Middle Ages, A.D. 1415-1485," *or*, "Great Britain and Europe, 1815-1885, with special attention to the Revolution of 1848." Some knowledge of the following books—"Mémoires de Commines"; "Paston Letters"; Fortescue, "Governance of England"; *or*, Lamartine's "Histoire de la Revolution de 1848," and Louis Blanc's "Histoire de la Revolution de 1848," will be required. For other Authorities, see Outline of course of Lectures.

Subjects for 1901.

(Will be announced later.)

II. In *Constitutional History* four papers:—

Subjects for 1900 *and* 1901.

(1) and (2) Constitutional History of England (*a*) from 1066 to 1450; (*b*) from 1688 to 1707.

(3) Origins and Principles of the chief European Constitutions.

(4) History of Civil and Religious Liberty, from 1384 to 1563.

The Candidate must show some familiarity with the original sources (in Latin, French, Old English, &c.).

III. In *History of Art* four papers:—

Subjects for 1900 and 1901.

(1) The general subject (two papers) embracing:—The Class Lectures; the Professor's Manual "The Fine Arts"; Conway's "Dawn of Art in the Ancient World"; Maspero's "Dawn of Civilization" and "The Struggle of the Nations"; Woltmann's "History of Painting," Vol. I.; Vasari's "Lives" of Giotto, Angelico, Donatello, Brunelleschi, Michelangelo (in Blashfield and Hopkins' edition of the "Lives," or in Bohn's translation, with the addition of Richter's Notes in Vol. vi. of Bohn's edition).

(2) Classical Archæology (two papers). The examination will be in the same books, &c., as those prescribed in this subject in 1900 and 1901 for Honours in Classics (see p. 138,) and the papers will be set at the same time.

VII.—Economic Science.

(*i.e.* Political Economy with either (*a*) Moral Philosophy or (*b*) History as supplementary Honours Subject.)

Subjects for 1900 *and* 1901.

1. *Political Economy.*—An advanced knowledge of Economic Theory. Special knowledge of the Economic Functions of Government and Public Finance. General Economic History of England, and special study of set subjects.

Books recommended:—General Theory.—Marshall's *Principles of Economics*, Vol. I.; Keynes' *Scope and Method of Political Economy;* Nicholson's *Principles of Political Economy.* For Reference on Abstract Methods—*Pantaleoni's Pure Economics.*

Government and Finance.—Adam Smith's *Wealth of Nations*, Book V.; J. S. Mill's *Political Economy*, Book V.; Sidgwick's *Political Economy*, Book III.; Bastable's *Public Finance.* For Reference—Sidgwick's *Elements of Politics*, chaps. i.-xiii. and xviii., xix., xxviii., and xxxi.

Economic History.—Cunningham's *Growth of English Industry and Commerce;* Seebohm's *English Village Community*, chaps. i.-v. For Reference—Roger's *Six Centuries of English Work and Wages;* Ashley's *Economic History.*

Three Papers will be set.

2. *Moral Philosophy* as for Honours in Mental Science.

3. *History* as for Honours in History.

REGULATIONS FOR SCHOOLMASTER'S DIPLOMA.

1. Candidates for the Schoolmaster's Diploma must be graduates in Arts of a Scottish, English, or Irish University, or of some other University approved of by the Senatus and the University Court.

2. Each Candidate must have matriculated in the University for the year in which he presents himself for the Diploma.

3. Each Candidate must have attended the Class of the Theory, Art, and History of Education in the University.

4. Each Candidate must pass an Examination in the Theory, Art, and History of Education, to be conducted by the Professor of that subject, and an Examiner appointed by the University Court.

5. The subjects of Examination are announced annually in the *University Calendar.*

6. Each Candidate must give evidence either—

(*a*) That he has attended a Course of Practical Instruction as a Queen's Scholar in a Training College for Teachers; *or*,

(*b*) That he has gone through a complete course of Practical training in a Training College for Teachers—the Course to

extend over not less than five months (eight hours weekly), and to include Demonstration and Criticism Lessons.

N.B.—*Those desirous of obtaining the Secondary School Diploma will further be required to spend a month in a Secondary School.*[1]

or,

(c) That she has completed a Practical Course in St George's Training College, Edinburgh, and passed the practical examination of the University of Cambridge Syndicate.

7. Each Candidate must further satisfy the University of his practical aptitude as a Teacher by teaching a class in some special Subject or Subjects in which he has received instruction in the University, or in any Institution recognised by the University as qualifying for Degrees.

8. Each successful Candidate will receive a Diploma signed by the Vice-Chancellor of the University, or, in his absence, by the Principal or the Senior Professor. This Diploma is of two grades: (*a*) *Secondary School Diploma*, for Masters of Arts with Honours in any Department, testifying to their fitness for Secondary Schoolmasterships, and will state the Special Subjects in which the holder of the Diploma is qualified. When a Candidate requires special mention made of his competency to teach French or German, he is required to pass a practical examination in French or German pronunciation and conversation; (*b*) *General Diploma*, for those who have taken the ordinary Degree of M.A. This is recognised by the Scottish and English Education Departments as qualifying (in the case of Graduates of the University of Edinburgh) for employment in Public Schools.

9. The Fee for the Diploma is £2, 2s.

The Examinations begin on Monday, 30th October 1899, and on Friday, 30th March 1900, at 9 A.M., and Candidates are required to enter their names and pay the Fees at the *Matriculation Office* on or before 4th October and 2nd March.

The subjects of Examination are the same as for Graduation in Education (which see, page 132), but the Standard of Pass is much higher, *with the addition* of Milton's "Tractate"; Quintilian's "Institutions," Books I. and II.; and "The History of Education, Hellenic and Roman," as in the "Historical Survey of Pre-Christian Education," by the Professor; and the General Outlines of History, as in Quick's "Biographies," from 1750 A.D.

A short Thesis will be prescribed to be written in the Examination Room on an Educational subject.

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[1] The Royal High School and the Heriot Secondary School have been made available for this purpose.

Competitive Examinations for Bursaries in Arts.

HONOURS LIST.

October 1898.

I.—Students Entering First Session.

A. General Bursary List.

(*Subjects of Examination*—English, Latin, Greek, Mathematics, French, German, Italian, and Dynamics (with additional papers in English, Latin, Greek, Mathematics, French, and German). Candidates select not more than five subjects. Those who select Latin, Greek, or Mathematics take the papers on these subjects on the Higher Standard.

1. E. B. Ross, George Watson's College.
2. A. H. Armstrong, R. Academical Inst., Belfast.
3. W. B. Brander, George Watson's College.
4. P. B. M. Macaulay, George Watson's College.
5. Alexander Gray, Dundee High School.
6. James Waterston, George Watson's College.
7. J. M. M'Intosh, George Watson's College.
8. J. R. Davidson, George Watson's College.
9. J. A. A. Morrison, George Watson's College.
10. John Smith, Ayr Academy.
11. J. M. Sutherland, Fettes College.
12. Robert Aitken, George Watson's College.
13. D. K. Cunnison, George Watson's College.
14. J. A. Gunn, Kirkwall Burgh School.
15. W. B. Gravely, Daniel Stewart's College.
    Duncan M'Diarmid, M'Laren High Sch., Callander.
    A. J. Ritch, Kirkwall Burgh School.
16. W. J. B. Selkirk, George Watson's College.
17. James Scobie, Daniel Stewart's College.
18. C. D. O Barrie, Dumfries Academy.
    F. G. Saleeby, Royal High School.
19. David Lees, Ayr Academy.
20. Charles M'Neil, George Watson's College.
21. J. P. Ross, George Watson's College.
22. A. W. Madsen, Royal High School.
23. J. A. Cameron, Perth Academy.
24. C. F. Allan, S. Bridge Public School
25. A. J. Ross, F.C. Normal Training College.
    Peter White, Harris Academy, Dundee.
26. Peter Connell, Dunnikier Pub. Sch., Kirkcaldy.
27. R. F. Lindsay, Waid Academy, Anstruther.
28. Robert Younger, Daniel Stewart's College.
29. William Gemmill, Spiers School, Beith.
30. G. M. Harper, Royal High School.
31. J. W. E. Gladstone, George Watson's College.
    A. J. Laing, Dundee High School.
32. A. P. Duffes, George Watson's Col.
33. J. F. Milne, George Watson's College.
34. G. G. Campbell, Inverness Royal Academy.
35. John Bain, Royal High School.
    J. Y. Sutherland, Anderson Institute, Lerwick.

B. JOHN WELSH CLASSICAL BURSARY.

(*Subjects of Examination*—English, Latin, and Greek.)

1. E. B. Ross, George Watson's College.
2. W. B. Brander, George Watson's College.
3. P. B. M. Macaulay, George Watson's College.
   J. M. Sutherland, Fettes College.
4. A. H. Armstrong, Royal Academical Institution, Belfast.
5. J. R. Davidson, George Watson's College.
6. John Smith, Ayr Academy.
7. James Waterston, George Watson's College.
8. (Med.) F. G. Saleeby, Royal High School.
9. J. M. M'Intosh, George Watson's College.
10. Robert Aitken, George Watson's College.
    D. K. Cunnison, George Watson's College.
11. J. P. Ross, George Watson's College.
12. J. A. Gunn, Kirkwall Burgh Pub. School.
    Charles M'Neil, George Watson's College.
13. Alexander Gray, Dundee High School.
14. David Lees, Ayr Academy.
15. W. B. Gravely, Daniel Stewart's College.
16. J. W. E. Gladstone, George Watson's College.

C. JOHN WELSH MATHEMATICAL BURSARY.

(*Subjects of Examination*—Mathematics, especially pure Geometry).

1. E. B. Ross, George Watson's College.
2. W. B. Brander, George Watson's College.
   J. A. A. Morrison, George Watson's College.
3. A. J. Ross, F.C. Normal Training College.
4. A. J. Ritch, Kirkwall Burgh School.
5. Robert Aitken, George Watson's College.
   A. H. Armstrong, R. Academical Inst., Belfast.
6. Peter White, Harris Academy, Dundee.
7. J. A. Cameron, Perth Academy.
8. Peter Connell, Dunnikier Pub. Sch., Kirkcaldy.
9. W. B. Gravely, Daniel Stewart's College.
   Alexander Gray, Dundee High School.
10. P. B. M. Macaulay, George Watson's College.

D. GEORGE HERIOT BURSARIES FOR WOMEN (ARTS).

(*Subjects as for General Bursary Competition.*)

1. Catherine A. Nicolson, Ladies' Coll., Geo. Sq.
2. Lilias M'Gregor, Nithside Acad., Dumfries.
3. Nellie N. M. Gow, Ladies' Coll., Geo. Sq.
   Harriet S. Nisbet, St Margaret's Ladies' College.
4. Helen M'Lachlan, Ladies' Coll., Queen Street.
5. Jemima W. S. Meiklejohn, Dingwall Academy.
6. Jeanie C. Rait, Girls' High Sch., Garnethill.
7. Beatrice S. Mason, Ladies' Coll., Queen Street.
8. Annie K. Craig, Ladies' Coll., Geo. Sq.
9. May O. Swanston, Ladies' Coll., Queen Street.
10. Elizabeth B. Smith, Ladies' Coll., Queen Street.
11. Annie J. Grant, Ladies' Coll., Q. St.
12. Agnes A. M'Gregor, Nithside Acad., Dumfries, & J. Classes, Univ.
13. Jane M. Sim, Peterhead Acad.
14. Elizabeth F. Porter, Arbroath High School.
15. Jessie A. Menzies, Forfar Acad.
16. Mary C. Jolly, Gorgie School.
17. Mary H. Lawson, Leith Walk Pub. School.

E. GEORGE HERIOT BURSARIES FOR WOMEN (MEDICINE).

(*Subjects of Examination*—The Preliminary Examination for Arts or Science.)

Sheila M. Ross, H. School, Glasgow.

F. RENTON BURSARY.

(*Subjects of Examination*—English and Mathematics.)

Peter Connell.

G. MACKINNON BURSARY.

(*Subjects of Examination*—As for Preferential Bursaries, with Gaelic in addition.)

Charles Macpherson. | Neil Ross.

H. KELLAND PRIZE.

(*Subject of Examination*—Geometry.)

A. J. Ross. | Peter White.

II.—SECOND YEAR BURSARIES.

(*Subjects of Examination*—Latin, Greek, and Mathematics.)

F. J. Gordon. | G. Turner Ford.
William Pryde. | W. N. Prophet.
S. G. Corner.

III.—THIRD YEAR BURSARIES.

(*Subjects of Examination*—Classics, Mathematics, and Logic with Psychology.)

J. A. Ferguson.

GRADUATES IN ARTS.

HIGHER DEGREES.

1897.

DOCTOR OF LETTERS (D.LITT.).

Alexander Douglas Thomson, M.A. (Edin.).

1897.

DOCTOR OF PHILOSOPHY (D.PHIL.).

John Davidson, M.A. (Edin.).
Robert Latta, M.A. (Edin.).
Hugh Ross Mackintosh, M.A. (Edin.).
Patrick Johnston Maclagan, M.A. (Edin.).

SPONSIO ACADEMICA FOR M.A.

Nos qui Nomina subsignamus Magisterii titulo jamjam donandi Spondemus nos in omni debitae gratitudinis officio erga Universitatem Academicam Edinburgensem ad extremum vitae halitum perseveraturos.

DEGREE OF M.A. WITH HONOURS—1889-1899 *inclusively.*

The names of all Graduates in Arts with Honours previously to 1889 will be found in the List of Graduates of the University published in 1889.

The contractions Class., Phil., Math., Engl., Mod. Lang., and Nat. Sc., indicate the Departments or Groups of Classics, Mental Philosophy, Mathematics and Natural Philosophy, English, Modern Languages, and Natural Science, respectively; and the Italic Numerals, i., ii., and iii. indicate First, Second, and Third Class Honours respectively.

1889.

Class. i., Patrick Duncan, Harry Angus Alexander Kennedy, Thomas Ross Mills, Jas. Cruickshank Smith, John Tennant.

Class. ii., Robert Alex. Falconer, Alexander Harris Hutt.

Phil. i., Charles Mackinnon Douglas, William George Smith.

Phil. ii., David Walton Vaughan.

Math. i., James Ireland Craig, William Andrew Knowles, Jas. Fairbairn M'Kean.

Nat. Sc., Alexander Bremner, John Brown Clark, David Davidson, John Melvin Lowson, Robert Stewart M'Dougall, John Machray, John Hally Meikle, Harry Fisher Menzies, Alexander Gordon Wallace, John Young.

1890.

Class. i., John Maclennan, James Watt.

Class. ii., William Brereton Dennison, William Barron Stevenson.

Phil. i., Andrew Nisbet Bogle, Duncan Mackenzie, Thomas Dixon Rutherford, James Stewart.

Phil. ii., Henry Reynolds Brown, William Elmslie Wilkie Brown Dempster, Arthur Herbert Gray, Walter Hardie.

Math. i., Charles Tweedie.

Nat. Sc., James Adamson, William Lewis Martin, John Myles, Andrew Robertson Wilson.

1891.

Class. ii., John Adam Norrie, William Gibson Wedderspoon.

Phil. i., Henry Barker, John Davidson, Walter Charles Murray.

Phil. ii., Alexander Grieve, Wm. Allan Neilson, Alexander Joseph Pearse.

Math. i., John Forbes, Adam Mitchell Hunter, William Edward Philip, William Leslie Thomson, John Turner.

Nat. Sc., Robert Pollok, James Rodger Watson.

1892.

Class. ii., Peter Campbell, William Gracie, Hugh Ross Mackintosh.

Phil. i., Hugh Ross Mackintosh.

Phil. ii., Thomas Linton, William Joseph Pennell.

Math. i., James Mitchell.
Math. ii., Alexander Campbell Mackay.
Nat. Sc., John Smith Flett.

1893.

Class. i., Robert Gordon McKerron.
Class. ii., Walter Robertson Henderson, Hugh Lugton Jackson, Robert Montgomerie Samson.
Phil. i., Alexander Beith Macaulay, Hugh Pattison Macmillan, Lilias Maitland.
Phil. ii., William John Collier, Sydney Smith, William Finlay son Trotter.
Math. i., Neil Macmichael.
Math. ii., George Lowe Moffat, Frank Spence, Thomas Wilkie Wilson, James Wood.
Nat. Sc., Frank Spence, William White Taylor, William Watson.

1894.

Class. i., George Liddell, James Middleton Moore, Robt. Lindsay Ross.
Phil. i., James Black Baillie.
Math. i., Alexander George Burgess, John Watt Butters, Henry Herd, John Alexander Johnston.
Math. ii., Thomas Cleghorn Baillie.
Nat. Sc., John Watt Butters.

1895.

Class. i., Francis Dewar, William John Keith, Alexander Buchanan Macdonald, William Wallace M'Kechnie, Alfred Croom Paterson, William David Ross.
Class. ii., George Duncan Low, Peter M'Gregor, James MacKenna, Charles Cunningham Watson.
Phil. i., John Macaskill.
Phil. ii., James Bonnar Russell, Robert Whyte.
Math. i., John Forbes Cameron, Hugh Archibald Jamieson, James Alexander Macdonald, Thomas William Pickles.
Math. ii., Robert Candlish Melville Bell.
Engl. i., David Nichol Smith.

1896.

Class. i., Charles Samuel Edgar, Alexander Macgregor, Jessie Thomson Muir.
Class. ii., Marshall Newton Goold Gray, Tom Bell Maxwell Lamb, William Robb.
Math. and Nat. Phil. i., William Jeffrey, Malcolm Caird M'Alpin, Andrew Cameron Smith, Frank Guthrie Smith.
Math. and Nat. Phil. ii., John Smith Begg, Leopold Octavius Critchley.
Engl. i., George Douglas Shepherd.
Engl. ii., Emily Moir Milligan.
Engl. iii., Louisa Reid Boyd.

1897.

Class i., Sidney George Campbell, William Alexander Curtis, Arthur Berriedale Keith, Donald Allan Macnaughton, Thomas Stewart Macpherson, William Cuthbert Morton.
Class. ii., David William Inglis, Ethelwyn Lemon, William Mackenzie, George Robert Thomson Ross.
Class. iii., Marcus Dods.
Phil. i., Charles Macfie Campbell, Bruce M'Ewen, Frances Helen Melville, George Claus Rankin, George Robert Thomson Ross.
Phil. ii., Alfred George Hogg.

Math. and Nat. Phil. i., Richard Bell, Alexander Brown, James Chalmers Leighton.
Math. and Nat. Phil. ii., David Macrae Aitken, George Ednie, William David Proudfoot.
Engl. i., George Dundas Craig.
Hist. i., John M'Farlane.

1898.

Class. i., Victor Caldwell, William Dunbar, John Lees, Bernard Herrmann Richardson, James Stirling Ross.
Class. ii., Alexander Flint, David Lindsay Norrie.
Class. iii., Rosa Gertrude Caroline Stoltz.
Phil. i., Archibald Scott Ballantyne, Alexander Darroch, John Adam Gray, David Hutchison Macgregor, Alexander Mair, Æneas Rose.
Math. and Nat. Phil. i., Ernest Masson Anderson, B.Sc., James Mitchell Low, John Brotchie Meiklejohn, Hugh Mitchell, James Thomas Young, B.Sc.
Math. and Nat. Phil. ii., Henry Alfred Braine, Patrick Sinclair Hardie, James Lornie.
Math. and Nat. Phil. iii., Donald Banks, William Thomson.
Eng. ii., Charles Henry Moore, William Porter.
Mod. Lang. i., George Brown, James Melville.
Mod. Lang. ii., Jessie Annie M'Kechnie.
Hist. ii., Bessie Brown Bird, Alexander Barrie Robb.

1899.

Class. i., James Young Bell, James Crerar, Augusta Murray Campbell Davidson, Charles Gordon Mackay.
Class. ii., Donald James Boyd, Joseph Hardie Cattanach, Henry Crawford Liddell, Herbert Smiles, Ralph Alexander Wilson.
Phil. i., Thomas Miller Forsyth, Lilias Amélie Geraldine Fraser, John Mackintosh Shaw.
Phil. ii., George Wedderspoon.
Math. and Nat. Phil. i., Robert Duncan Bell, David Drysdale, James Macdonald Dunnett, Archibald Milne, Samuel Findlater Stewart.
Math. and Nat. Phil. ii., George Aimer Russell, Henry Wilkie.
Math. and Nat. Phil. iii., Alexander Waddell.
Eng. i., Thomas Paterson.
Eng. ii., William Geddie, Charles Frederick Grant.
Mod. Lang. i., Bessie Hunter Auld Robson.

HONOURS OBTAINED AFTER GRADUATION.

Phil. iii., Peter Campbell (M.A.).
Mod. Lang. ii., Isabella Murray Ogilvie (M.A.).

ORDINARY DEGREE, 1898-99

30th July 1898.

Alexander Gordon Cairns. | John Alexander Gray.
Tom Alexander Menzies.

29th October.

James Alexander Aitchison.
Charles Anderson.
Alison Trotter Cowe.
George Henry Donald.
James Robert Hunter.
John Millar.
Janie Macbeth Robertson.

14th April 1899.

Atkinson, Frank Lockwood.
Biscombe, Alice Beatrix.
Black, Isabella Cunningham.
Bogie, David Kinnear.
Burns, Samuel.
Butler, George.
Callender, Duncan Macnab.
Clark, George.
Clements, Rosanna.
Cook, Margaret Shankland.
Cormack, Alexander.
Croal, Bertha Jane Murray.
Donald, Alexander Graham.
Donaldson, Robert.
Drummond, Lizzie Young.
Duncan, Elizabeth Annie.
Dunnett, William Alexander.
Ewing, John Christie.
Fordyce, James Hedderwick.
Girdwood, James.
Grant, Donald.
Gray, James M'Ash.
Hall, Andrew Alexander.
Halley, James.
Hamilton, Robert.
Heggie, David.
Henderson, Jessie Richardson.
Imrie, John Hamilton,
Lamont, Donald.
Lawson, Helen Ann.
Leith, Duncan Gordon Macnaughten.
Lillie, Richard.
Lorimer, James Bannerman.
Macdonald, William King Hamilton.
M'Farlane, Lucy Elizabeth.
Mackay, Annie Leslie.
Mackay, John Selby.
Mackenzie, William.
Matheson, John Carstairs.
Meikle, William Henry.
Melville, John Hutchison.
Milligan, Oswald Bell.
Mills, Magnus Manson.
Murphy, Alexander Coghill.
Neill, Helen Stewart.
Oliver, James.
Oswald, Hugh.
Peters, John Leighton.
Rixon, Charles William.
Rodger, James Bowman.
Sawers, David Hay.
Scott, John Easton.
Scott, Thomas Fraser.
Smith, Jessie Robertson.
Stewart, Margaret Justice.
Strachan, John.
Tait, William Keith.
Wallace, Charles Stuart.
Wardrop, Charles William Inglis.
Wilkie, George.
Wilson, Robert Lyall.
Winchester, Hugh Sinclair.
Young, Margaret Campbell Wylde.

SCHOOLMASTER'S DIPLOMA, 1898-99.

The Diploma was conferred on the following Candidates:—

A.—Diploma for Teachers in Secondary Schools.

14th April 1899.

John Lees, M.A., Edin. (First Class Honours in Classics).
James Melville, M.A., Edin. (First Class Honours in Modern Languages).
Charles Henry Moore, M.A., (Edin.) Second Class Honours in English).
Isabella Murray Ogilvie, M.A., Edin. (Second Class Honours in Modern Languages).
James Thomas Young, M.A., B.Sc., Edin. (First Class Honours in Mathematics).

B.—General Diploma.

30th July 1898.

Grace Fairley Matthew, M.A. (Edin.).
Margaret Christina Watson, M.A. (Edin.).

14th April 1899.

Andrew Melville Anderson, M.A., Edin.
Alice Beatrix Biscombe, M.A., Edin.
Isabella Cunningham Black, M.A., Edin.
James Alexander Grant, M.A., Aberd.
Helen Ann Lawson, M.A., Edin.
Lucy Elizabeth M'Farlane, M.A., Edin.
Annie Leslie Mackay, M.A. Edin.
Euphemia Wardlaw Menzies, M.A., Edin.
Jessie Robertson Smith, M.A., Edin.
Margaret Justice Stewart, M.A., Edin.

Bursaries, Prizes, Scholarships, and Fellowships in Arts.[1]

I.—BURSARIES.

NOTE—*From the sums given below Income Tax will be deducted, which may be recovered by the Bursars; and in some cases a deduction will be made for expenses of administration. The accuracy of the figures is not guaranteed.*

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
			At present				
I.	16—	George Heriot.	£600 0 0	20	3	£30 0 0	Governors of George Heriot's Trust.
		Do. Bursaries for Women.	930 0 0	32	3	30 0 0	Do.
		Do. Geo. Heriot's School University Bursaries.	600 0 0	20	3	30 0 0	Do.
		Do. High School Univer. Bursaries.	240 0 0	8	3	30 0 0	Do.
II.	1619	Archibald Johnston, Merchant in Edin.	13 2 2	1	4	13 2 2	Earl of Haddington.
III.	1622 1764 1766	John Trotter of Mortonhall, and Rev. J. Penman of Bothkennar.	12 18 1	1	4	12 18 1	Trotter of Mortonhall and Gilmour of Craigmillar, alternately.
IV.	1626 1629 1640 1726	Hugh Wight, David M'Call, and David Christie.	13 1 1	1	4	13 1 1	Town Council.
V.	1639	Dr Robt. Johnstone of London.	31 10 0	2	4	15 10 0	Hope Johnstone of Annandale.
VI.	1639	Do. do.	25 0 0	2	4	12 10 0	Town Council.
VII.	1642 1653 1696	Weir, Jenkins, Hepburn, and Lightbody.	11 7 9	1	4	11 7 9	Town Council, 1st and 2nd Presentations, and Campbell of Aberuchill, 3rd Presentation.
VIII.	1644 1673	Jas. Dalgliesh, and Jn. M'Morran.	13 7 8	1	4	13 17 8	Town Council.
IX.	1678	John Penman, Bailie and Merchant, Edinburgh.	14 15 0	1	4	14 15 0	Society for the Benefit of the Sons of the Clergy.
X.	1678	Hector Ford of Branxton.	33 6 6	3	4	11 2 2	Town Council.
XI.	1687	Sir Andrew Ramsay of Abbotshall.	11 2 2	1	4	11 2 2	Do. and Ministers of Edinburgh.
XII.	1698	Ad. Chrystie, Under Clerk of Session.	18 0 0	1	4	18 0 0	Faculty of Advocates.
XIII.	1702	Thos. Bryson, Bailie and Merchant in Dunbar.	10 0 0	2	4	5 0 0	Ministers of the Presbytery of Dunbar.
XIV.	1703 1725	Pringle and Wardrop.	17 3 10	1	4	17 3 10	Pringle of Torwoodlee and J. C. Wardrop, W.S., alternately.

[1] See Conditions, page 158.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
XV.	1714	Rev. Robert Brown, of Protestant Consistory at Zamose.	£25 0 0	2	4	{ 15 0 0 10 0 0	Town Council.
XVI.	1723	Alexander Mitchell and James Shortt.	22 0 0	1	4	£22 0 8	Livingston Learmonth of Parkhall and his heirs; Earl of Morton and his heirs.
XVII.	1734	Laurence Dundas, Professor of Humanity in the University of Edin.	About 42 0 0	2	4	About 21 0 0	Jas. Dundas of Dundas, Robt. Dundas of Arniston, and Dundas of Carronhall, by turns.
XVIII.	1768	Thos. Fraser, Clerk in the office of City Clerk, Edinburgh.	43 10 0	2	7	21 15 0	The Provost, Dean of Guild, and Treasurer of Edin.
XIX.	1784	William Hume, Eastbarns, Dunbar.	16 0 0	2	4	8 0 0	Ministers of the Presbytery of Dunbar.
XX.	1784	Rev. Jas. Millar and Spouse.	24 0 0	1	4	24 0 0	Kirk Session of Kippen.
XXI.	1809	Dr Donald Grant, London.	About 180 0 0	4	4	About 45 0 0	Earl of Seafield, and James Mackenzie, W.S., as Dr Grant's Trus.; whom failing, Sen. Acad.
XXII.	1810	Rev. James Stuart.	36 0 0	2	3	18 0 0	Senatus Academicus.
XXIII.	1837	James Menzies.	200 0 0	4	4	45 0 0	Sir R. Menzies, Bart., & Ministers of Dull. Weem, & Fortingall
XXIV.	1837	Peter Dow, Esq. of Balmyle.	20 0 0	2	4	10 0 0	P. S. Keir, Esq. of Kindrogan, J. Small, Esq. of Dirnanean, and W. A. Keir, Esq., Yr. of Kindrogan.
XXV.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk.	9 12 6	1	3	9 12 6	Principal, and Profs. of Latin, Greek, Mathematics, Logic & Metaphysics, and Moral Philosophy.
XXVI.	1846	John Jamieson, Esq., Edinburgh.	About 26 0 0	1	4	About 26 0 0	Principal, & two Profs. of the University.
XXVII.	1846	G. P. Bidder, C.E.	43 12 0	1	4	43 12 0	Senatus Academicus.
XXVIII.	1852	Wm. Lennie, Esq.	48 0 0	4	4	12 0 0	Town Council.
XXIX.	1853	John Bruce, Esq., Trinity Crescent, Edinburgh.	160 0 0	{ 1 { 4	4 4	40 0 0 30 0 0	Do.
XXX.	1858	M'Diarmid Trustees.	10 0 0	1	3	10 0 0	Senatus Academicus
XXXI.	1860	Wm. Patrick, Esq., of Roughwood.	About 150 0 0	3	4	About 50 0 0	Principal and Professors in Arts.
XXXII.	1859	Edin. Ayrshire Club.	60 0 0	2	2	30 0 0	Edin. Ayrshire Club.
XXXIII.	1863	Peeblesshire Society.	20 0 0	1	4	20 0 0	Peeblesshire Society.
XXXIV.	1864	Edin. Caithness Association.	10 0 0	1	4	10 0 0	Edin. Caithness Association.

[1] See Conditions, page 160.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars	For Years.	Annual Allowance to each Bursar.	Patrons.
XXXV.	1864	A. H. Rhind of Sibster.	Interest of £500 0 0	1	4	About £20 0 0	Edin. Caithness Asso.
XXXVI.	1865	Mrs Margt. Tyndall Bruce, of Falkland.	165 0 0	3 3	3 3	35 0 0 20 0 0	Senatus.
XXXVII.	1865	Horsliehill Scott.	66 12 8	2	2	33 6 4	Do.
XXXVIII.	1867	Miss Hannah Harrison, of Lasswade.	33 5 0	1	2	26 5 0	Do.
XXXIX.	1867	Rev. John Spence	About 200 0 0	5	2	1st Year 30 0 0 2nd Year 40 0 0 3rd Year.	Governors of the Spence Bursary Trust.
XL.	1869 1872	Edin. Border Counties Association.	50 0 0	1 1	1 4	50 0 0 30 0 0 20 0 0	Edinburgh Border Counties Assoc.
XLI.	1869	Argyllshire, Bute, and Western Isles Asso.	12 0 0	1	4	About 12 0 0	Argyllshire Association.
XLII.	1870	Stewart of Ardvorlich.	16 0 0	1	4	16 0 0	Proprietor of the Estate of Ardvorlich.
XLIII.	1870	David Cowan.	About 35 0 0	1	2 1	About 30 0 0 20 0 0	Directors of Ayr Academy.
XLIV.	1871	J. Robertson Sibbald.	About 150 0 0	5	3	30 0 0	Tr. of Dr J. R. Sibbald.
XLV.	1872	Angus Club.	25 0 0	1	4	25 0 0	Angus Club.
XLVI.	1873	Earl of Zetland.	About 40 0 0	1	3	About 40 0 0	Trustees of Earl of Zetland.
XLVII.	1873	The Grierson Trus.	104 0 0	4 1	4 4	20 0 0 26 0 0	Senatus Acad.
XLVIII.	1874	Upper Ward of Lanarkshire.	20 0 0	2	4	20 0 0	Upper Ward Assoc.
XLIX.	1874	Johnstone of Harthope.	16 5 0	1	4	16 5 0	Senatus Acad.
L.	1874	James Lambert.	About 40 0 0	1	4	About 40 0 0	Senatus Acad.
LI.	1875	Robert Marshall.	32 10 0	1	4	32 10 0	Senatus Acad.
LII.	1876	J. Fothringham of Heathpool.	39 13 0	2	4	19 5 0	Senatus Acad.
LIII.	1877	Earl of Zetland.	About 40 0 0	1	3	40 0 0	Trustees.
LIV.	1878	Edin. E. Lothian Asso.	20 0 0	1	3	20 0 0	Association.
LV.	1878	Jas. Gillan, Forres.	63 0 0	3	3	21 0 0	Mr Gillan's Trustees.
LVI.	1878	Dr Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.
LVII.	1880	Rev. John Patterson.	16 2 4	1	2	About 16 2 4	Senatus Academicus.
LVIII.	1881	Thomas Carlyle.	About £160	8	4	20 0 0	Senatus Acad.
LIX.	1883	Subscribers to Mackinnon Testimonial	£60 18 6	3	3	20 5 0	Senatus Acad.
LX.	1882	James Whitelaw.	71 2 6	3	3	23 13 4	Senatus Acad.
LXI.	1883	William Renton, Edinburgh.	20 0 0	1	1	20 0 0	Profs. Chrystal, Tait, Crum Brown, and Nicholson.
LXII.	1883	Isabella Macdougall.	About 120 0 0	4	3	About 30 0 0	Trustees.

[1] See Conditions, page 162.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
LXIII.	[illegible]	Rev. P. Newton of Castlandhill.	£6 19 4	4	2	£1 14 [illegible]	Senatus Academicus.
LXIV.	[illegible]	Per. C. Mann of Nairn and Durham.	70 0 0 About	3	3	20 13 1 About	Senatus Academicus.
LXV.	1886	Richd. Allan, Fenar, Kelso.	90 0 0	3	3	30 0 0	Trustees of R. Allan.
LXVI.	1887	Mrs Kidd of Aigbarth, near Liverpool.	34 0 0 About	1	4	34 0 0 About	Senatus Academicus.
LXVII.	1887	Charles Jardine of Thorlieshope.	151 10 0 About	4	4	35 0 0 About	Senatus Academicus.
LXVIII.	1887	Charles Howatson, Esq. of Dornel and Glenbuck.	27 0 0 About	1	3	27 0 0 About	Trustees.
LXIX.	1888	Mrs Harriet E. Morrison.	27 0 0 About	1	4	27 0 0 About	Senatus Academicus.
LXX.	1889	Daniel Maclaurin, London.	62 10 0 About	1	4	62 10 0	Town Council.
LXXI.	1889	James Simson, Edinburgh.	150 0 0	6	3	25 0 0	Presbytery of Edinburgh.
LXXII.	1890	George Cousin.	28 0 0	1	3	28 0 0	Senatus Academicus.
LXXIII.	1[illegible]	Rev. Thomas Maule.	85 10 0	4	6	21 7 6	Principal, and Profs. of Humanity & Greek.
LXXIV.	1891	Donald Fraser, M.D., London, and Endowment Association.	51 0 0	1	1	51 0 0	Senatus Academicus.
LXXV.	1897	Misses Baxter of Balgavies.	60 0 0 About	2	3	30 0 0 About	Senatus Academicus.
LXXVI.		James Stewart, Duart.	35 0 0	1	3	35 0 0	Kirk-Sess. of Callander and Trossachs.

Conditions of Tenure.

I. These *Heriot Bursaries* are for Students unconnected with the George Heriot's School, entering upon a regular Curriculum in Arts or Science with a view to graduation. *Bursars* 1898, A. H. Armstrong, James Waterston, J. R. Davidson, John Smith, James Scobie, Robert Aitken, J. A. Gunn, Duncan M'Diarmid, W. J. B. Selkirk.

Heriot Bursaries for Women. These Bursaries are for Women Matriculating for the first time at the University with a view to graduation in Arts or Science, and cannot be held along with any other Bursary or Scholarship. *Bursars*—1898, C. A. Nicolson, Lilias M'Gregor, Nellie N. M. Gow, H. S. Nisbet, Helen M'Lachlan, J. W. S. Meiklejohn, Jeanie C. Rait, Beatrice S. Mason Annie K. Craig, M. O. Swanston, Eliz. B. Smith, Annie J. Grant.

George Heriot's School University Bursaries. These are awarded by competitive examination among Scholars attending the George Heriot's School, and may be held at any University approved by the Governors. *Bursars*—1898, Wm H. Allan, David A. Bishop, Geo. A. Carse, Alex. S. Gordon, Wm. Landells, Thomas Peebles.

[1] See Conditions, page 166.

Heriot High School University Bursaries. These are awarded by competitive examination among Scholars attending the High School, Edinburgh, and may be held at any University approved by the Governors. *Bursars* 1898, F. G. Saleeby, G. M. Harper, John Bain.

II. *A. Johnston Bursary.* Each Bursar is entitled to hold this Bursary for four years, subject to the conditions that he shall pass such examination as may be required of Presentation Bursars, and shall proceed through the Curriculum in Arts, and pass the Examinations for M.A. appropriate to each year. No one is permitted to hold the Bursary along with any other Bursary in the University. The Bursar must attend the Classes in the Arts Curriculum.

III. *Trotter and Penman Bursary.* This Bursary is held under the same conditions as No. II.

IV. *Wight, M'Call, and Christie Bursary.* This Bursary is held under the same conditions as No. II.

V. and VI. *R. Johnstone Bursaries.*—By Ordinance No. 82, the holder of each of the four Robert Johnstone Bursaries is entitled to hold his Bursary for four years, subject to the condition that he shall pass the Preliminary Examination or its equivalent, and shall proceed through the Curriculum in Arts, and regularly pass the Examinations required for the degree of M.A. No person is allowed to hold any of these Bursaries along with any other Bursary in the University. Agents, Messrs Hope, Todd & Kirk, W.S., 119 Princes Street, Edinburgh, agents for the Patron. *Bursars*—*John Graham*, *Andrew Glendinning*.

VII. *Weir, Jenkins, Hepburn, and Lightbody Bursary.* For a Student in Arts, who must pass the Preliminary Examination or its equivalent, and follow the Curriculum for the Degree of M.A.

VIII. The *Dalgliesh and Macmorran* Bursar must pass the Preliminary Examination or its equivalent, and proceed through the Curriculum in Arts in the University, and regularly pass the Examinations required for the Degree of M.A.

IX. *Penman Bursary.* The Bursar must attend the Classes in the Arts Curriculum. *Bursar*—Alexander F. Jack.

X. Each *Ford* Bursar is entitled to hold his Bursary for four years, subject to the condition that he shall pass the Preliminary Examination or its equivalent, and shall proceed through the Curriculum in Arts, and regularly pass the Examinations required for the Degree of M.A. No person is permitted to hold any of the Bursaries along with any other Bursaryin the University.

XI. The *Sir A. Ramsay* Bursar holds his Bursary for four years, subject to the condition that he shall pass the Preliminary Examination or its equivalent, and shall proceed through the Curriculum in Arts, and regularly pass the Examinations required for the degree of M.A. No person is permitted to hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University.

XII. The *Chrystie Bursary* is held for four years. Candidates must pass the Preliminary Examination or its equivalent. The Bursar is taken bound to attend "the usual classes," and must produce yearly to the Faculty certificates from the respective Professors of his due attendance, and the diligent prosecution of

his studies. Candidates are referred for information to the Clerk to the Faculty of Advocates, Advocates' Library.

XIII. The *Bryson* Bursars must pass the Preliminary Examination or its equivalent, and are first to enter the Humanity class: afterwards to pass through the rest of the classes in Arts until their Laureation; at which time, if judged by the ministers of the Presbytery of Dunbar fit for the study of Theology, they may continue for two years in Theology.

XIV. The *Pringle and Wardrop Bursary.*—The Bursar must pass the Preliminary Examination or its equivalent, and attend the classes in the Curriculum in Arts for M.A. *Bursar—James W. E. Gladstone.*

XV. The *Bryson Bursaries* are payable to Bursars who must pass the Preliminary Examination or its equivalent, and attend the regular course of study in Arts for M.A.

XVI. The *Mitchell and Shortt Bursary* is payable to a Student who must pass the Preliminary Examination or its equivalent, during the regular course in the Faculty of Arts. *Bursar—Edward B. Ross.*

XVII. *Dundas Bursaries.*—By Ordinance No. 78 of the Universities' Commissioners, each person presented to either of the Dundas Bursaries is entitled to hold the same for four years as a Student of Arts, subject to the conditions that he shall pass the Preliminary Eamination or its equivalent, and proceed through the Curriculum in Arts, and shall regularly pass the Examinations required for M.A. These Bursaries cannot be held with any other Bursary in the University. Apply to G. Auldjo Jamieson, Esq., 24 St Andrew Square, Edinburgh. *Bursar—A. P. Duffes.*

XVIII. The *Fraser Bursaries.*—Bursars must pass the Preliminary Examination or its equivalent, and proceed through the curriculum till they finish their course and take the Degree in the Faculty of Arts. The Bursaries are held for three years thereafter; the Bursars making their election whether to follow Divinity, Law, or Medicine. Two Classes at least must be attended each Winter Session. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

XIX. The conditions of the *Hume Mortification* correspond with those of Bryson's, No. XIII., and the presentations and payments are made as in that case.

XX. *Millar Bursary.*—To be held by a Student intended for the Ministry in the Church of Scotland, during his Curriculum in the Faculty of Arts. Bursar must pass the Preliminary Examination or its equivalent.

XXI. The *Grant Mortification.* Tenable in the Faculties of Arts, Science, Divinity, Law, or Medicine. Applications for information may be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh. *Bursars*—1898,

XXII. *Stuart Bursaries.*—Open to Students entering upon the second year of their course for graduation in Arts or in Pure Science. The said Bursaries shall be tenable for three years, provided that if the holders graduate at the end of their second year of tenure they shall only retain their Bursaries during the third year of tenure if they engage in a course of study approved by the Senatus Academicus in subjects included in the Curriculum for Degrees in Arts or in Pure Science.

Bursars—1896, J. M. Dunnett; 1898, *W. N. Prophet, S. G. Corner*, for two years.

XXIII. *Menzies.*—These Bursaries, four in number, were founded in 1837 by James Menzies, Esq., Glasgow. They are of the annual value of £45 each, but vary in amount at discretion of the patrons, and tenable for four years, in any one of the Universities of St Andrews, Glasgow, or Edinburgh. Preference first to the relations of the Founder; next, to the name of Menzies; failing whom, to persons born on the estate of Sir Robert Menzies, Bart., within the parishes of Dull, Weem, and Fortingall; failing whom, any Student who shall be found best qualified may be appointed. Candidates must pass the Preliminary Examination.

XXIV. *The Dow Bursaries* are tenable for four years, "at any of the Scottish Universities, St Andrews in preference." Apply to the Patrons.

XXV. The *Blair* Bursar must pass the Preliminary Examination, attend the Classes, and pass the Examinations necessary for the Degree of M.A. *Bursar*—1898, *R. F. Lindsay.*

XXVI. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Roberton, Culter and Biggar. The Bursar must pass the Preliminary Examination or its equivalent. He may attend Classes in any of the Faculties. *Bursar* 1898, .

XXVII. Called the "*Jardine Bursary*," being founded by Mr Bidder, C.E., as a memorial of the munificence of Sir Henry Jardine to him, to which he owed the advantage of his education at the University of Edinburgh. Candidates must be natives of Scotland. The Bursar must pass the Preliminary Examination or its equivalent, and attend the Classes, and pass the Examinations necessary for the Degree in Arts. *Bursar*—1890, Alexander Thomson.

XXVIII. *Lennie Bursaries.*—Bursars must pass the Preliminary Examination or its equivalent, and attend the Classes in the Arts Curriculum. Candidates should apply to the City Clerk, Council Chambers, Edinburgh.

XXIX. *Bruce Bursaries.*—Prior to the commencement of each Winter Session, five Students are presented yearly, the most distinguished of the five receiving the £40 Bursary. The Bursars must be in regular attendance on the Classes necessary for the Degree of Master of Arts. Candidates to apply to the City Clerk, Council Chambers.

XXX. The *M'Diarmid Bursary* is a memorial of the late John M'Diarmid, Esq., Editor of the *Dumfries and Galloway Courier*. Candidates must be natives of the county of Dumfries or the stewartry of Kirkcudbright. The Bursar must pass the Preliminary Examination and attend the Classes and Examinations necessary for the Degree of Master of Arts. Applications regarding the Bursary to be made to "H. Gordon, Esq., Dumfries." *Bursar* .

XXXI. The *Patrick Bursaries* are for the assistance of those who have completed a course of education at any of the public schools or academies in the county of Ayr, where a course of Classical Study is pursued. The rectors or head teachers of each of said schools or academies may grant a certificate or letter to any number, not exceeding four, of the best scholars who have completed their course of education at such school or academy, and are in a position to enable

them to apply for admission to the University; and the parties holding such letters or certificates are entitled to present themselves for examination as candidates for the Bursaries. Failing qualified candidates, the Senatus may award by open competition. The Bursars must attend the Classes and pass the Examinations necessary for the Degree in Arts, in the order required by the Faculty. *See* p. 197 of CALENDAR for 1865-66. *Bursars*—1896, G. O. Dunnett, James Girdwood, William Legat; 1898, *P. B. M. Macaulay.*

XXXII. *Ayrshire Club Bursaries.*—Restricted to natives of Ayrshire, men or women, and tenable for two years. Apply to the Secretary of the Club, Andrew White, Esq., W.S., 23 Castle Street, before 15th September. *Bursar*—1898, *W. Gemmill.*

XXXIII. *Peeblesshire Bursary.*—Open to Candidates of either sex who intend to pursue the Curriculum in Arts, Science or Medicine. Apply to the Secretary of the Society, P. H. Cosens, Esq., W.S., 17 Duke Street, Edinburgh. *Bursar*—1896, James Robert Lindsay.

XXXIV. and XXXV. *Caithness and Rhind Bursaries.*—Bursars must attend Classes in Arts Curriculum. Apply to Secretary of the Association.

XXXVI. *Bruce of Grangehill and Falkland's Bursaries.* Three of these Bursaries, of the annual value of £35, are awarded after competitive examination to Students of the *second* year in their course of study for a Degree in Arts; and three others, of the annual value of £20, to Students entering the *first* year of the Arts Curriculum. *Bursars*—First year, 1896, H. J. Anderson; 1897, G. T. Ford; 1898, *Peter White, Peter Connell* (two years); second year, 1897, J. B. Jamieson; 1898, *F. J. Gordon.*

XXXVII. *Horslichill-Scott Bursaries.*—Annual value £33, 6s. 2d., under deduction of £6, 6s. for Examiners' fees from first year's payments. Open to Students in the *third* year of their course for a Degree in Arts, and tenable for two years. The examination is in Classics, Mathematics, and Logic and Metaphysics. Deed of Foundation, at p. 208 of CALENDAR for 1866-67. *Bursars*—1897, J. Y. Bell; 1898, *J. A. Ferguson.*

XXXVIII. The *Harrison Bursary* is of the annual value of £33, 5s., under deduction of £6, 6s. of Examiners' fees from first year's payments. Open to Students in the *third* year of their course in the Faculty of Arts, with a view to a degree, and tenable for two years. It is to be awarded to the competitor who shall show the greatest proficiency in Classics, Mathematics, and Logic and Metaphysics. *See* Deed of Endowment, p. 231 of CALENDAR for 1867-68. *Bursar*—1897, J. W. Meldrum.

XXXIX. *Spence Bursaries.*—By the regulations of the Governors, two Bursaries, each of the annual value of £30 for the first year and £40 for second year of tenure, are open to Students of either sex who, after passing the preliminary examination, or such other examination as may from time to time be accepted by the Joint Board of Examiners as equivalent thereto, have attended one Winter Session or its equivalent in the Faculty of Arts in the University of Edinburgh, and have attended at least two classes qualifying for Graduation, and who intend to complete the course of study for the degree of Master of Arts at the University. The Governors may award to any Bursar, if they are satisfied of his or her merit,

a continuation Bursary of an annual value of £50, tenable for one year, on condition that the Bursar shall for that year attend such a curriculum of study in any of the Faculties as the Governors may approve. Subjects of Examination are Latin, Greek, and Mathematics. Candidates apply to Mr Henry A. Pattullo, Solicitor, 1 Bank Street, Dundee, Factor to the Trust, for particulars.

XL. *Border Counties and Sir Walter Scott Bursaries.*—These Bursaries are open to competition by Scholars (women as well as men) who have attended any school in either of the Counties of Roxburgh, Berwick, Selkirk, or Borough of Berwick-on-Tweed, for two complete sessions immediately prior to the time of their examination for the Bursaries. The Bursars must attend the classes necessary for a Degree in Arts. Application to be made to Mr T. Usher, Sheriff Court House, Edinburgh.

XLI. *Argyllshire Bursary.* — Candidates must be natives of Argyllshire, Bute, or Western Islands. The holder must attend the classes necessary for a Degree in Arts. Application to be made to John Maclachlan, Esq., W.S., 48 Castle Street, Edinburgh.

XLII. *Ardvorlich Bursary.*—Open to Students of Arts, natives of the parishes of Comrie, Balquhidder, Callander, or Killin, failing whom, to natives of Perthshire, and failing such, to the best qualified candidate. Candidates must show that they require aid in obtaining a University education. The holder must pass the Preliminary Examination or its equivalent. He will also be examined in Preliminary Gaelic, and must attend Arts or Science classes. The Bursary cannot be held with any other Bursary exceeding £25 annually. For remodelled Foundation, see CALENDAR 1887-88, p. 501; for original deed, see p. 275 of CALENDAR for 1870-71. *Bursar*—1898, *D. H. Ash.*

XLIII. *Cowan Bursary.*—Candidates must be about to enter the Curriculum in Arts. Annual value for first two years £30, and £20 for third year, to be held alternately at Edinburgh and Glasgow Universities. Information will be afforded by J. G. M'Skimming, Esq., Accountant, Ayr. *Bursar*—1898, *David Lees.*

XLIV. *Sibbald Bursaries.*—The Bursaries are available to Students in the Faculties of Arts, Medicine, Law, or Divinity, and are open to Students entering the University who have not previously attended any University in the United Kingdom or elsewhere, *and who do not hold any other Bursary or Scholarship*: but no objection to a Candidate that he has, during the previous Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. *See* CALENDAR for 1888-89, pp. 171 and 177. Application to be made to Messrs Mackenzie, Innes, & Logan, W.S., 23 Queen Street, Edinburgh. *Bursars*—1897, A. R. Low, A. J. Sturrock; 1898, *J. M. M'Intosh.*

XLV. *The Angus Club Bursary.* Open to Forfarshire students entering the University for the first time. Application should be made to the Secretary of the Club, Mr William Whyte, S.S.C., 4 Albyn Place, Edinburgh.

XLVI. *Orkney and Zetland Bursary.*—Open to first year Students (male or female), natives, or children of parents who are natives of the County of Orkney and Zetland. It is tenable for three years. The Bursar must attend the Classes in the Curriculum in Arts, with a view to a Degree. Applications to be sent to

Messrs Dundas & Wilson, C.S., 17 St Andrew Square, Edinburgh. The Deed of Foundation will be found in CALENDAR for 1873-74, p. 329.

XLVII. *Grierson Bursaries.* Four Bursaries of £20 each, and one of £24, awarded annually in November. They are restricted in the first place to natives of either of the parishes of Crawford or Leadhills, who must pass the Preliminary Examination or its equivalent. In the event of more than one preferential Candidate, the examination is competitive. If no preferential Candidates, the Bursaries are thrown open for competition to all Students then intending to enrol in the University for the First Session of the Curriculum in Arts, the subjects of examination being as for open Bursaries of the First Year. *See* Trust Disposition of Founder at p. 335 of CALENDAR for 1873-74, and p. 368 of the CALENDAR for 1877-78. *Bursars* 1897, J. S. Kinghorn, F. H. T. Gray; 1898, *W. B. Graveley, J. M. Sutherland.*

XLVIII. *Lanarkshire* (Upper Ward of) *Bursaries.* Bursars must attend the Classes in the Arts Curriculum. Mr R. Brown, Secretary, 28 St Andrew Square.

XLIX. *Johnstone of Harthope Bursary.* Natives of Moffat, Peebles, and Students of the name of Alexander or Johnstone preferred, if applications (with proof of birth) be made to Secretary of Senatus before 1st of September. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. *See* Deed of Foundation, at p. 350 of CALENDAR for 1875-76. *Bursar—*

L. *Lambert Bursary.* This Bursary cannot be instituted until after the death of an annuitant. *See* Deed of Foundation, at p. 342 of CALENDAR for 1875-76.

LI. *Marshall Bursary.* Restricted in the first place to relatives of Founder, next to Students of the name of Marshall, and natives of West Lothian. *See* Deed of Foundation, at p. 347 of CALENDAR for 1876-77. *Bursar* -1896, J. M. Marshall.

LII. *Fothringham and Forrest Bursaries.* Restricted in the first place to relatives of the Founder, in the second to such as are of the name of Fothringham, and in the third place to such as are of the name of Forrest, and failing all these to be awarded as an open Bursary. The successful candidate must attend the Classes in the Faculty of Arts, and take the Degree of M.A. *Bursar—* 1897, Thomas Nicol; 1898, *A. W. Madsen.*

LIII. *Earl of Zetland's Bursaries.*—These Bursaries are open to First Year Students in the Faculty of Arts, who are natives of the Islands or County of Orkney and Zetland, or children of parents, one or both of whom shall have been born in or connected for a long period of years with the said Islands or County. For Deed of Foundation of these Bursaries, *see* p. 373 of CALENDAR for 1877-78. Application to be made to Messrs Dundas & Wilson, C.S., 17 St Andrew Square, Edinburgh.

LIV. *Edinburgh East Lothian Association's Bursary.*—The Bursary may be competed for by any lad under the age of 18, who has been educated at any school in East Lothian, or who, having passed through all the standards or their equivalents at such schools, shall have afterwards attended for not more than three sessions any secondary school within or without the county. Application may be made to J. Purves, S.S.C., 65 Frederick Street, Edinburgh.

LV. *Gillan Bursaries.*—Founded in 1878 by James Gillan, draper, Forres. These Bursaries are for the support at the University, and at the New College, Edinburgh, of two young men connected with the parish of Forres, and one connected with Dyke, who have declared their intention to study for the ministry of the Free Church of Scotland. For particulars apply to Messrs R. & R. Urquhart, Solicitors, Forres.

LVI. *Thomson Bursaries.*—Candidates of the name of Thomson or Traquair, or natives of town or county of Dumfries or city of Edinburgh, preferred. *See* Deed of Foundation, p. 367 of CALENDAR, 1877-78, and Scheme of Allocation, p. 346 of CALENDAR, 1879-80. Applications to be made to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street. *Bursars*—1895, H. C. Liddell; 1897, R. W. Johnson; 1898, *C. D. O. Barrie.*

LVII. *Patterson Bursary, in Anglo-Saxon, Grammar, and Literature.*—Open to Students in the second, third, or fourth year of their Matriculation who have attended the class of English Literature. The holder must produce a Certificate of Attendance on the Honours Course in English Language in the first Session after his appointment. The Examination will include Anglo-Saxon, Grammar, Translations of passages of Anglo-Saxon prose and verse, and the History of Anglo-Saxon Literature. *See* Deed of Foundation at p. 379 of CALENDAR for 1880-81. 1898, not awarded.

LVIII. *John Welsh Bursaries*, founded by Thomas Carlyle in 1881, in memory of his Father-in-law, to whom the estate of Craigenputtock in Dumfriesshire, bequeathed by Mr Carlyle to the University of Edinburgh, formerly belonged. The Bursaries are paid from the rents of that estate, and are eight in number, of the value of about £20 each, tenable for four years. They are awarded, after competition, to Students entering the University, who have not studied in any other University. Four are to be given to the competitors most proficient in Mathematics, and four to those most proficient in Classics. They are not to be held with any other Bursary. *See* Deed of Foundation at p. 379 of CALENDAR for 1881-82. *Bursars*—(*Classical*)—1898, *W. B. Brander.* (*Mathematical*)—1895, R. H. Macnair, Alexander Waddell; 1898, *J. A. A. Morrison.*

LIX. *Mackinnon Bursaries.*—Three Bursaries about £20, 6s. 2d., tenable for three years, to encourage the study of the Mechanical Sciences. Each Bursary is open for competition to Students entering their First Session in the Faculty of Arts. Candidates must be natives of the counties of Argyll, Bute and Arran, Inverness, Ross or Sutherland, and must be able to speak the Gaelic language. The Examination is held at the annual competition for Bursaries at the beginning of each Session, with an additional examination in Gaelic by the Professor of Celtic; at least 10 per cent. of the total marks attainable being assigned to Gaelic. Each Bursar is bound to attend at least two classes in the Faculty of Arts during his tenure, and among these six classes, at least one class of Mathematics, one of Natural Philosophy, and the class of Engineering. The Bursaries cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, or with any office yielding an annual income of £50 or upwards, and is tenable only during good behaviour and proficiency. *Bursars*—1896, John M'Nab; 1897, John M'Dougall, J. D. M. Black; 1898, *Charles Macpherson.*

LX. *Whitelaw Bursaries.*—In memory of James Whitelaw, Watchmaker. Three Bursaries, about £23, 14s. 2d. each, tenable for three years, open to Students about to enter, or who follow the Curriculum in Arts. Cannot be held along with any other Bursary, Scholarship, or Fellowship in a Scottish University, or with any office yielding £50 annually, or upwards. Examination in October annually. *Bursars*—1896, Thomas Davidson; 1897, D. C. Davidson; 1898, *J. A. Cameron, C. F. Allan.*

LXI. The *Renton Bursary*, founded by the Trustees of the late William Renton, 20 Royal Terrace, Edinburgh, is not restricted to Students of the first year. The holder must attend one or more of the classes of Natural Philosophy, Mathematics, Chemistry, or Political Economy. Pecuniary circumstances will be taken into consideration. It cannot be held by anyone under the age of sixteen or above twenty-one, or with another Bursary of the annual value of £30 or upwards. The examination is in English and Mathematics, as for the First Year Open Bursaries. *Bursar*—1898, *Peter Connell.*

LXII. The *Macdougall Bursaries* are open to Students of Edinburgh, Glasgow, and St Andrews Universities. Students attending the Gaelic Class to be preferred. The Bursaries cannot be held with any Bursary or appointment yielding upwards of £50 per annum. *See* Deed of Foundation at p. 435 of CALENDAR 1885-86. Application may be made to Mr W. C. Young, solicitor, Perth.

LXIII. *Newton Bursaries.* Two are awarded annually, one to the most distinguished Student in the Junior Class of Natural Philosophy, and one in the Senior (Second) Class of Mathematics. The Bursaries are tenable for two years, and the Bursars must continue their studies in the higher branches of the subjects of their Bursaries, and at the end of the second year of tenure, either take Honours in Mathematics and Natural Philosophy, pass the 2nd B.Sc. Examination, or give other evidence of advanced study in Mathematics or Natural Philosophy. These Bursaries are not to be held with other Scholarships or Bursaries. *See* Deed of Foundation, p. 460 of CALENDAR, 1886-87. *Bursars* (*Math.*)—1898, *D. E. Cameron;* 1899, W. J. Kelly (*Nat. Phil.*)—1898, William Gentle; 1899, George Philip.

LXIV. *Mann Bursaries.*—(1.) Candidates must be children of residents in the town of Nairn, *i.e.*, one or both parents must have resided within the municipal boundaries for at least twelve months at any period prior to the competition. (2.) Applications must be lodged with the Clerk of Senatus at least three weeks before the Annual Bursary Examination of the University, along with evidence of compliance with Rule I. (3.) One will be awarded annually to the candidate, matriculating for the first time in this University, who obtains the highest marks at the Entrance Bursary Examination in English, Latin, Greek, and Mathematics, provided the Examiners be satisfied with the standard he has attained. (4.) Each will be tenable for three years, value about £25 per annum. (5.) Failing candidates of the first year, the vacant Bursary will be awarded as a second year Bursary to the candidate who obtains the highest marks in the Bursary Examination for the second year; and, failing candidates of the first and second years, it will similarly be awarded as a third year Bursary. When awarded under this Rule it is tenable

for one year only. (6.) Failing candidates qualified under Rule III. or Rule V., the Senatus may continue one of the Bursaries to its holder for a fourth year, provided he propose to continue his studies for a fourth year in some special subject. (7.) Each Bursar must be *bona fide* engaged in studying for a Degree in Arts or in Science, and must produce evidence at the end of each Winter Session that he has attended at least two classes in the Faculty of Arts, or in a Department of Science, and has made reasonable progress in his studies. (8.) Any breach of these regulations, or conduct unworthy of a scholar and a gentleman, will be punished by forfeiture of the Bursary. *See* Deed of Foundation, p. 497 of CALENDAR 1887-88, and Regulations at p. 544 of CALENDAR for 1890-91. *Bursars*—1896, Hugh Winchester; 1897, W. G. Alexander; 1898, *John Alexander*.

LXV. *Allan Bursaries.*—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Medicine, or Law, in the University of Edinburgh, or to Students attending the classes in said University necessary for Degrees in Science; and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

LXVI. *James Fairbairn Bursary*, founded by Mrs Kidd of Palmyra, Aigbarth, near Liverpool, in memory of James Fairbairn, late Governor of Heriot's Hospital, is open to competition to first year Students, and is tenable for four years. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursary cannot be held along with any other Bursary or Scholarship. *See* Deed of Foundation, p. 501 of CALENDAR, 1887-88. *Bursar*—1897, D. G. Robertson.

LXVII. *Jardine of Thorlieshope Bursaries.*—Natives of the rural districts of Roxburgh-shire and Dumfriesshire (villages and towns of the population of 2000 and upwards being excluded), who have attended the Public or Board Schools in said counties, to be preferred. In the event of there being no first year Candidates, the Bursaries will be thrown open to Candidates of the second, third, or fourth year in succession, but will be tenable for one year only. The Bursars are required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the Course. The Bursaries cannot be held along with any other Bursary or Scholarship. See Deed of Foundation, p. 497 of CALENDAR, 1887-88. *Bursars*—1896, J. P. M'Gowan; 1897, A. B. Lorimer, R. Nichol; 1898, *J. P. Ross*, *C. L. Hunter* four years), *W. G. Robertson* (three years), *Joseph Thomson* (two years), *John Gass* (two years), *John Cochrane* (one year).

LXVIII. *The Glenbuck Bursary* may be held by a Student in any of the four Scotch Universities preferably that of Glasgow or of Edinburgh. Candidates only are eligible who have resided not less than five years in the Parish of Muirkirk, and who have received part of their education at any school therein, or alternatively and postponed thereto, those who have been resident in any one of

the Parishes of South Ayrshire for not less than five years, and who have received part of their education in any school in the same Parish. For further particulars, apply to Mr R. A. Leslie, Inspector, Muirkirk.

LXIX. *MacKenzie (Stornoway) Bursary.*—Candidates of the name of MacKenzie have a preference. The Examination is the same as for First Session Open Bursaries, and the Bursary will be awarded to the Candidate who stands highest, provided he has passed the Preliminary Examination in at least two subjects, one of which must be Latin, Greek, or Mathematics on the Higher Standard. Failing a preferential Candidate, the Bursary will be thrown open to competition as a first year Bursary in Arts. The Bursar is required to attend the Classes necessary for Graduation in Arts, and to take the Degree at the end of the course. For Regulations, *see* CALENDAR for 1895-96, p. 748. *Bursar*—1896, William Mackenzie.

LXX. This Bursary, tenable for four years, is by the will of the founder to be called the "Maclaurin Bursary," and is restricted to Students of the Founder's name of Maclaurin (or in Gaelic orthography "Maclalhrin"). The holder must pass the Preliminary Examination. It may be held in any of the Faculties. *See* Deed of Foundation, p. 544 of CALENDAR for 1890-91.

LXXI. Six Bursaries, each of the annual value of £25, and tenable for three years in the Faculty of Arts. They are open to Students who, having passed the Preliminary Examination, are entering on the first year of the Course in Arts, and are studying for the Ministry of the Church of Scotland. For conditions of tenure and subjects of examination, apply to the Rev. George T. Jamieson, The Manse, Portobello, Clerk to the Presbytery of Edinburgh. *Bursars*—1897, *J. M. B. Duncan, W. P. Gillieson, Adam Mackay*; 1898, *David Scott.*

LXXII. *Bailie Cousin's Bursary* is open for competition to Students entering the Faculty of Arts on a regular course for the Degree of M.A. The holder must regularly pass the departmental examinations appropriate to each year. The Bursary cannot be held along with any Fellowship, Scholarship, or Bursary of any Scottish University, or with any situation or appointment yielding an annual income of £30 or upwards. For Deed of Foundation *see* CALENDAR 1891-92, page 536. *Bursar*—1897, H. Nelson.

LXXIII. *Maule Bursaries.*—These Bursaries are for the education of poor and deserving Students. They may be held by Students prosecuting their studies in any of the Faculties. The Examination is the same as for University Open Bursaries. *See* Excerpt from Trust Deed, p. 543 of CALENDAR for 1891-92, and Deed of Foundation, in CALENDAR for 1894-95. *Bursars*—1897, J. B. Duncan; 1898, *A. J. Ross, Andrew Renwick* (five years).

LXXIV. *The Donald Fraser Bursary* is awarded for high merit in the University Class of Natural Philosophy, combined with proficiency in Laboratory Work. The Bursar is required to give assistance in the University Physical Laboratory, and to engage in research there. The Bursary cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University.

See Deed of Foundation, p. 545 of CALENDAR for 1891-92. *Bursar*—1899, J. R. Milne.

LXXV. These Bursaries are open both to men and women who have been educated in the High School of Dundee for at least one year immediately preceding the competition. The subjects of Examination, and the values attached to each subject, are the same as for the Open Bursaries in Arts, with the omission of Italian, and the addition of Chemistry (full marks, 50), as a subject of Examination. Candidates may select not more than five subjects, and the successful candidates may study for the Degrees of M.A., B.Sc., B.L., LL.B., or M.B., Ch.B.

The successful candidates must have passed the Preliminary Examination in Arts or Science, or its equivalent. For Regulations, *see* page 429 of CALENDAR for 1897-98. *Bursar*—1897, John M. Newton; 1898, *A. J. Laing*.

LXXVI. Tenable by a native of Parishes of Callander or Trossachs studying in any Scottish University with a view to taking the Degree of M.A. Applications to be made to R. Fulton, Esq., Schoolhouse, Callander, with certificate of birth, before 1st September.

II.—PRIZES.

See note under Bursaries, page 155.

I.—THE LORD RECTOR'S PRIZE.

The Lord Rectors since 1879, during their respective tenures of office, have offered a Prize of Twenty-five Guineas annually, for the best Essay on a Historical Subject.

1898. *J. A. Inglis, B.A., LL.B.*

II.—EDINBURGH UNIVERSITY CLUB (OF LONDON) TRIENNIAL PRIZE.

A Prize of Twenty Guineas, open triennially, for competition in any of the Faculties by Graduates of not more than two years' standing, is offered by the Edinburgh University Club of London (James Taylor, M.A., M.D., Hon. Secretary, 49 Wellbeck Street, London, W.), for the best Essay on a subject prescribed by the Deans of the Faculties in the following rotation (viz., Arts, Divinity, Law, Medicine, and Science), subject to the approval of the Senatus. The Prize will be open in 1901 in the Faculty of Divinity.

1898. *G. C. Rankin, M.A.*

III.—BRUCE OF GRANGEHILL AND FALKLAND'S PRIZE IN THE CLASSES OF LOGIC AND METAPHYSICS.

This Prize of £20 (with a supplementary Prize of £10 for the Junior Division of the Class) is awarded to the most distinguished student in this class, "on such conditions and competition as the Professor may direct, and on his decision," for excellence in the study of Logic and

Metaphysics. It was founded in 1865, by Mrs Tyndall Bruce of Grangehill and Falkland, in commemoration of John Bruce, Professor of Logic and Metaphysics in the University, 1774-1786.

1899. *J. M. Shaw.*

IV.—GRAY PRIZES.

The Gray Prize Essay Fund was instituted in 1851, in terms of the Will of Simon Gray, Esq., of Mornington Crescent, London. The Trustees offer annually for competition, three prizes of £15 for the first, £10 for the second, and £5 for the third best Essay on a subject to be intimated annually in the CALENDAR under Prizes open for the year. No information beyond that which is given under Prizes open in 1899-1900 will be given. Rev. A. J. B. Paterson, M.A., Duns, Secretary to the Trustees.

1898. 1st Prize, *James Stirling Ross.*
2nd Prize, *Elizabeth Gardiner.*
3rd Prize, Not awarded.

V.—SCOTT AND DUNBAR PRIZE.

This Prize, of the value of about £20, was founded in 1872 by the Rev. Hew Scott, D.D., of Anstruther Wester, for encouraging the study of the Greek Language in the University of Edinburgh. It is awarded annually to "the most deserving and learned student in the Greek Classes," after such Examination as may be directed by the Principal and the Professors of Divinity, Greek, and Humanity. *See* Deed of Foundation at p. 332 of CALENDAR, 1873-74.

1899. *J. Y. Bell.*

VI.—THE COUSIN PRIZE.

This Prize, founded in connection with the Class of Fine Art by the late David Cousin, Esq., is of the annual value of about £15, 4s., and is awarded at the close of each session for proficiency in Class Essays set from time to time by the Professor. *See* Excerpt from Mr Cousin's will in CALENDAR, 1880-81, p. 380.

1899. *E. M'Gegan.*

VII.—KELLAND MEMORIAL PRIZE.

The Committee for promoting a Memorial to the late Professor Kelland has handed over to the University the sum of £147, 10s., for the purpose of founding a Prize to be called the "Kelland Memorial Prize," to be awarded annually to the most distinguished Student in Pure Geometry in the Junior Mathematics Class. The value of the Prize is about £4, 12s.

1898. *A. J. Ross.*

III.—SCHOLARSHIPS.

NOTE—*From the sums given below Income Tax will be deducted, which may be recovered by the Scholars; and in some cases a deduction will be made for the expenses of administration. The accuracy of the figures is not guaranteed.*

I.—PITT CLUB CLASSICAL SCHOLARSHIP.

The Pitt Club Scholarship of the annual value of £58, 10s., tenable for four years. By ordinance No. 17 of the Scottish Universities' Commissioners of 1858 it is open for competition to all who have passed regularly through the Course in Arts in the University, and have been admitted to the Degree of M.A. in Edinburgh, at any time within four years before the competition takes place. The subjects embraced in the examination are CLASSICS and ENGLISH LITERATURE. The next competition may take place in April 1901.

1897. *A. Croom Paterson, M.A.*

II.—MACKENZIE CLASSICAL SCHOLARSHIP.

This Scholarship was founded in 1862, by James Mackenzie, Esq., W.S. It is of the annual value of £106, 5s., tenable for four years, and the award carries with it free admission to the Edinburgh Philosophical Institution during the years of tenure. By ordinance No. 90 of the Scottish Universities' Commissioners of 1858, it is open for competition to all Graduates in Arts in the University of Edinburgh of not more than three years' standing at the time of the competition. Candidates are examined in CLASSICAL LITERATURE and in ENGLISH LITERATURE, and the Examination is conducted by three or more Examiners selected by the Senatus from their own body. It cannot be held along with any other Scholarship, Fellowship, or Bursary, of any Scottish University. The Examinations include—1. Translations from Latin and Greek authors; 2. Composition in Latin and Greek Prose; 3. Latin and Greek Literature, and History; 4. English Essay-Writing; 5. History of English Literature. The next competition may take place in April 1901.

1897. *William Wallace M'Kechnie, M.A.*

III.—SIR DAVID BAXTER MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of £63, 9s. 2d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-65, p. 171) it is awarded for proficiency in the department of Mathematics, particularly in that branch of it which includes mechanical and physical science. Competitors must be Graduates in Arts of the University, of not more than four years' standing at

the time of the competition, who have taken Honours in the department of Mathematics and Natural Philosophy. The next competition may take place in April 1900.

1896. *Malcolm C. M'Alpin, M.A.*

IV.—SIR DAVID BAXTER PHILOSOPHICAL SCHOLARSHIP.

This Scholarship, also founded by Sir David Baxter, Bart., of Kilmaron, is of the annual value of £63, 9s. 4d., and is tenable for four years. By the terms of the Deed of Foundation (given in the CALENDAR for 1864-65, p. 171), it is awarded for proficiency in the Department of Mental Philosophy. Competitors must be Graduates in Arts of the University, of not more than four years' standing at the time of the competition, who have taken Honours in the department of Mental Philosophy. The subjects of examination are Logic, Metaphysics, and Moral Philosophy. The next competition may take place in April 1903.

1899. { *Alexander Mair, M.A.* / *G. R. T. Ross, M.A.* } Equal.

V.-VII.—JOHN EDWARD BAXTER SCHOLARSHIPS.

These Scholarships were founded in 1876, and are three in number, each of the annual value of about £83, and tenable for three years. One is in the Department of Classical Literature, another in Mental Philosophy, and the third in Mathematics and Natural Philosophy. They are open for competition to all Masters of Arts of the University of not more than three years' standing at the time of the competition. The Scholarship in Mental Philosophy may be open in April 1900, and those in *Mathematics* and *Classics* may be open in April 1902. *See* Deed of Foundation at p. 361 of CALENDAR for 1877-78.

1899. *J. S. Ross, M.A.* (*Cl.*).
Alexander Brown, M.A. (*Math.*).
Prox. access., J. T. Young, M.A., B.Sc.

VIII.—DRUMMOND MATHEMATICAL SCHOLARSHIP.

This Scholarship was founded in 1865 by Miss Elizabeth Drummond, in memory of her brother, Captain Drummond, R.E., Under Secretary for Ireland. It is of the annual value of £92, 7s. 6d., and is tenable for three years. By the Deed of Foundation (given at p. 198 of CALENDAR for 1865-66), it is open to Graduates in Arts of not more than three years' standing, who have graduated with Honours in the Department of Mathematics. It cannot be held with any other Bursary or Scholarship, and the holder is recommended to travel for the purpose of inspecting, in this and other countries, remarkable engineering and architectural structures, to extend his knowledge of the practical application of Mathematical principles; and, if required by the Senatus Academicus, to deliver reports on the principal structures

examined by him, and the Mathematical principles exemplified thereby; which reports the Senatus may cause to be publicly read in the University or elsewhere in Edinburgh. The next competition may take place in April 1900.

1897. *John Alexander Johnston, M.A.*

Prox. access., M. C. M'Alpine, M.A., and J. F. Cameron, M.A.

IX.—BRUCE OF GRANGEHILL AND FALKLAND'S CLASSICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for three years, during two of which the studies of the Scholar must be prosecuted in the University of Edinburgh, but in the third year they may be prosecuted in an English or Foreign University. By the terms of the Deed of Foundation (given at p. 205 of the CALENDAR for 1866-67), this and the two following Scholarships held by Students who have passed their Examinations for the Degree of Master of Arts with Honours, have hitherto been conferred upon the most distinguished in that one of the Honours Departments which is appropriated for each year. The Scholarship cannot be conferred upon any one whose age exceeds twenty-three years, and it cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 per annum. In the event of the Scholarship becoming vacant during the period of tenure, through resignation or otherwise, of the Scholar, then the sum falling in shall be bestowed by the Senatus for the remaining period of tenure on a Student attending the Divinity Classes who shall be reported by the Faculty of Theology to be a meritorious Student and deserving of the Scholarship. The next award may be made in April 1902.

1899. *C. G. Mackay, M.A.*

X.—BRUCE OF GRANGEHILL AND FALKLAND'S SCHOLARSHIP IN MENTAL PHILOSOPHY.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examination are Logic and Psychology, Metaphysics, Moral Philosophy, and History of Philosophy. The next award may be made in April 1901.

1898. *J. Adam Gray, M.A.*

XI.—BRUCE OF GRANGEHILL AND FALKLAND'S MATHEMATICAL SCHOLARSHIP.

This Scholarship, founded in 1865 by Mrs Tyndall Bruce of Falkland, is of the annual value of £100, and is tenable for the same period, and under the same conditions as the preceding. The subjects of examina-

tion are Mathematics and Natural Philosophy. The next award may be made in April 1902.

1899. *R. D. Bell, M.A.*

XII.—GRAY SCHOLARSHIP.

This Scholarship, founded by Mr Gray of Baad Park in 1864, is of the annual value of £80, 2s. 6d., and tenable for two years. It is awarded for distinction in one of the Honours groups of subjects for the Degree of Master of Arts, or in one of the groups of subjects for the Final Examination for the Degree of Bachelor of Science, or in the Historical and Philosophical subjects of the examination for the Degree of Bachelor of Laws, or to Students in the Faculty of Divinity for distinction in the Final Examination for the Degree of Bachelor of Divinity. It has been resolved that the Scholarship shall be offered in rotation in the Faculties of Arts, Science, Law, and Divinity. When it falls to the Faculty of Arts it will be offered in rotation in the order of the groups of Honours subjects in the Arts regulations, and when it falls to the Faculty of Science, it will be offered in one of the groups of the Second Science Examination. When not awarded in the Faculty in which it is offered, it will then be offered to the other Faculties in rotation. The holder of the Scholarship is required, as a condition of tenure, to satisfy the Senatus Academicus that he is pursuing special higher studies, or that he is engaged in original research, either in the University of Edinburgh or in another University approved by the University Court, and he must also satisfy the Senatus Academicus of the importance of the work he proposes to undertake, and of his qualifications for such work. The Scholarship will be awarded in 1901 in the Faculty of Law.

1899.

XIII.—GILCHRIST SCHOLARSHIPS.

These Scholarships were founded in 1865 by the Trustees of the late Dr Gilchrist; they are three in number, each of the annual value of £100, and are open to natives of India who have passed competitive examinations at the Presidential Colleges of India. They are attached to the Medical, Law, and Literary Classes in the University.

XIV.-XV.—FETTES EXHIBITIONS.

These Exhibitions are each of the annual value of £60, and are tenable for four years. They are open annually for competition, one among the Foundationers alone, and the other among the Foundationers and such other pupils as have attended Fettes College regularly for not less than five years.

XVI.-XVII.—RHIND SCHOLARSHIPS.

These Scholarships were, in accordance with the will of the late A. H. Rhind, Esq., of Sibster, founded by his trustees on the reversion of his estate. They are two in number, one in the Department of

Classical Literature, the other in that of Philosophy, are each of the annual value of £81. 6s. 2d., are tenable for not less than two years, or more than three years, and are open to Undergraduates and to Graduates of not more than three years' standing at the time of the competition. Competitors must have attended classes in this University for not less than three *winter* sessions or their equivalent, attendance being defined to mean that the competitors must present Certificates of having attended at least four classes during the period aforesaid, and of having duly performed the work of the classes. The successful Candidates may be required to undertake duties connected with the teaching of the University, or otherwise assist in some department of its operations. *See* Deed of Foundation at p. 323 of CALENDAR for 1874-75. The next competition for the Classical Scholarship may take place in April 1901, and the next competition for the Philosophical Scholarship may take place in April 1902.

1898. *William Rennie* (Cl.).—*Hon. ment.*, A. B. Keith, M.A., and W. D. Ross, M.A.

1899. *A. S. Ballantyne, M.A.* (Phil.).

XVIII.—THE CHARLES MACLAREN SCHOLARSHIP.

This Scholarship, founded in 1871 by the Trustees of Mrs Maclaren, in memory of Charles Maclaren, Esq., the eminent geologist, is of the annual value of £112, and is tenable for three years. It is for the encouragement of the study of Mathematics and Natural Philosophy, and is open to all graduates in Arts of not more than three years' standing at the time of the Competition (and under 30 years of age) who shall have taken honours in Mathematics. The successful competitors are to spend a few months in travelling and in examining remarkable Engineering and Architectural Structures, and to report to the Senatus, which report the Senatus may cause to be publicly read in the University. The Deed of Foundation is given at p. 324 of CALENDAR for 1873-74. The next competition may be in April 1902.

1899. *M. C. M'Alpin, M.A.*

XIX.—NEIL ARNOTT SCHOLARSHIP FOR EXPERIMENTAL PHYSICS.

This Scholarship, value about £33, was founded in 1874, and is awarded annually to the most distinguished Student in the Physical Laboratory of the University.

The recipient must, during the ensuing Summer and Winter Sessions, assist the Professor of Natural Philosophy in the Laboratory. Failing a Student deemed by the Professor worthy of the Scholarship, it may be given to the Candidate for a Degree in Arts who has undergone the Examination in Natural Philosophy with most distinction. *See* Deed of Foundation, at p. 340 of CALENDAR for 1875-76.

1899. *W. Gentle.*

XX.-XXII.—FERGUSON SCHOLARSHIPS.

The examination of Candidates for Three of these Scholarships, each of the annual value of £80, and tenable for two years, will be held in Glasgow, on Tuesday, 26th September 1899, and following day. One of the Scholarships to be awarded for the greatest proficiency in Classics; one for the greatest proficiency in Mathematics, including Natural Philosophy; and one for the greatest proficiency in Mental Philosophy, including Logic, Psychology, Metaphysics, and Moral Philosophy.

The Competition is open to "all persons who have passed the Examinations required for the Degree of Master of Arts in one of the Universities of Scotland (whether taking the Degree at the same time or not) provided that at the time of the Competition not more than six years have elapsed since the date of their first matriculation after having passed the Preliminary Examination, and who have not already gained one of these Scholarships." Candidates are required to enter their names at the Office of the Ferguson Bequest Fund, 94 Bath Street, Glasgow, not later than 1st September 1899.

For further information apply at the Office of The Ferguson Bequest Fund, 94 Bath Street, Glasgow.

Scholars, 1898.

Classical—George Gall Sim, M.A. of Aberdeen University.
Mathematical—George Donald Valentine, M.A. of Glasgow University.
Philosophical—David Hutchison Macgregor, M.A. of Edinburgh Univ.

XXIII.-XXXII. VANS DUNLOP SCHOLARSHIPS.

Ten Vans Dunlop Scholarships, each of the annual value of £100, and tenable for three years, are, by the Deed of Foundation, appropriated to the following subjects:—1. English Literature and Poetry; 2. Classical Learning—Latin and Greek; 3. Commercial and Political Economy and Mercantile Law; 4. Logic and Metaphysics; 5. Natural Philosophy; 6. Mathematics; 7. Hebrew and Oriental (Semitic) Languages; 8. History; 9. Moral Philosophy; 10. Sanskrit and Comparative Philology. In terms of the Trust-Disposition (which is given at p. 380 of Calendar for 1880-81), the Scholarships are given only for "distinguished proficiency" in the various subjects of competition, as determined by the Examiners and the Senatus Academicus.

The following are the General Regulations for the Examinations:—

Competitors for these Scholarships must have regularly attended at least one full Course or two Half-Courses in the University of Edinburgh during each Academic year in which they claim to have been Matriculated Students, and no Candidate is eligible who has discontinued attendance at the University of Edinburgh for more than one year. The years of Academic study count from the first year in which a Candidate has attended one of the classes qualifying for the degree of M.A.

Each Scholarship is tenable on condition that the Scholar submits annually to the University evidence that he is prosecuting his studies, or his professional work, in a manner satisfactory to the Senatus. The evidence may consist of—(1) Certificates of attendance on Lectures or Laboratories in this or some other University; or (2) Certificate of having acted as Assistant to a Professor in this or some other University; or (3) A written Report of work done by the Scholar during the year, together with a Thesis composed by himself on a subject connected with that work.

Not more than one of these Scholarships can be held by the same person, and Vans Dunlop Scholars cannot hold, along with their Scholarship, any other Fellowship, Scholarship, or Bursary in the University of Edinburgh.

Candidates for the Vans Dunlop Scholarships must, on entering for the Examinations, produce evidence that they have fulfilled the conditions of eligibility.

Candidates, if not already matriculated, are required to pay the Matriculation Fee for the year in which the competition takes place.

The names of Candidates highly distinguished in the Vans Dunlop Scholarship examinations may be published.

XXIII.—English Literature and Poetry.

Candidates are subjected to an Examination testing—(1.) Knowledge of the History of English Literature generally, and more particularly through a prescribed period; (2.) Acquaintance with certain books, chiefly of English Poetry, prescribed for special reading; (3.) Ability in English Composition, in the form of an Essay, written in the Examination Room, on some subject of literary criticism.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed five academic years either in this University alone or in this and any other University or Universities together; and who have given regular attendance in the Class of Rhetoric and English Literature, and in at least one other class on English Language or Literature. The next Competition may take place in March 1900.

The Professor of Rhetoric and English Literature, and an Examiner appointed by the Senatus, are the Examiners.

1897. *Donald T. Mackintosh.*
Prox. access., John Purves.

XXIV.—Classical Learning—Latin and Greek.

1. *Latin.*—The Examination will test :—
   (*a.*) Knowledge of Latin books and special subjects previously prescribed.

(*b.*) Power of Latin Composition, and of translating from Latin authors not previously prescribed.

(*c.*) Knowledge of Latin History and Literature.

2. *Greek.*—(*a.*) Knowledge of Greek books and special subjects previously prescribed.

(*b.*) Power of Greek Composition, and of translating from Greek authors not prescribed.

(*c.*) Knowledge of Greek History and Literature.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed four academic years either in this University alone or in this and any other University or Universities together; and who have given regular attendance in the Latin and Greek Classes necessary for graduation in Arts.

The next Competition will take place in October 1899.

The Professors of Humanity and Greek are the Examiners.

1896. *Arthur B. Keith.*

XXV.—Commercial and Political Economy and Mercantile Law.

The Examination will test knowledge of the subjects assigned in the Deed of Endowment to the Chair of Commercial and Political Economy and Mercantile Law. It will include the subjects embraced in the Lectures, and also in books prescribed from time to time by the Appropriate Board of Studies.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed five academic years either in this University alone or in this and any other University or Universities together; and who have regularly attended the Class of Commercial and Political Economy and Mercantile Law. The next Competition will take place in October 1901.

The Professor of Political Economy and an Examiner appointed by the Senatus are the Examiners.

1898. *D. T. Boyd.* } equal.
T. Fraser Scott. }

XXVI.—Logic and Metaphysics.

The Examination will test knowledge of (*a.*) Logic, (*b.*) Psychology, (*c.*) Metaphysics and the History of Philosophy. It will include the subjects embraced in the Lectures on each of these branches; also prescribed Reading and Studies of special subjects.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed four academic years either in this University alone or in this and any other University or Universities together; and who

have completed attendance at the Ordinary Class of Logic and Metaphysics. The next Competition will take place in October 1900.

The Professor of Logic and Metaphysics and the Professor of Moral Philosophy are the Examiners.

1897. *George Claus Rankin, M.A.*

XXVII.—Natural Philosophy.

The Examination will test the knowledge of the Candidates in Experimental Physics and Applied Mathematics.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two of the classes of Natural Philosophy, of which the Ordinary Course must be one. The next Examination will take place in March 1901.

The Professor of Natural Philosophy and an Examiner appointed by the Senatus are the Examiners.

1898. J. W. Low, M.A.

XXVIII.—Mathematics.

The Examination will test Candidates in pure mathematical subjects in the Honours Department for the Degree of Master of Arts, and in special subjects to be prescribed by the Examiners from time to time.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two of the Mathematical Classes, one of these being an Honours Class. The next Examination will take place in March 1901.

The Professor of Mathematics and an Examiner appointed by the Senatus are the Examiners.

1898. *Alexander Brown, M.A., B.Sc.*

XXIX.—Hebrew and Oriental (Semitic) Languages.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two courses under the Professor of Hebrew and Oriental Languages.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Oriental Languages, and an Examiner appointed by the Senatus. The next Competition will take place at the end of Winter Session 1902-3.

1899. *Richard Bell, M.A.*

XXX. History.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed five academic years either in this University alone or in this and any other University or Universities together; and who have attended two or more courses of Professorial Lectures on History within the University.

The Examiners are the Professors of History, and such others as may be appointed by the Senatus from time to time. The next Competition will take place in October 1901.

1898. *John M'Farlane, M.A.*
Prox. access., Alex. B. Robb, M.A.

XXXI.—Moral Philosophy.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed four academic years either in this University alone or in this and any other University or Universities together; and who have completed attendance at the Ordinary Class of Moral Philosophy.

The Professor of Moral Philosophy and the Professor of Logic and Metaphysics are the Examiners. The next Competition will take place in October 1901.

1898. *D. H. Macgregor, M.A.*

XXXII.—Sanskrit and Comparative Philology.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and who have not completed six academic years either in this University alone or in this and any other University or Universities together; and who have attended at least two courses under the Professor of Sanskrit and Comparative Philology.

The Examiners are the Professor of Sanskrit and Comparative Philology, and another Examiner to be appointed by the Senatus. The next Competition will take place in March 1901.

1898. *S. G. Campbell.*

XXXIII.—Skirving Scholarship for Moral Philosophy.

This Scholarship is to be founded (after the death of an annuitant) in accordance with the Will of the late David Skirving, of No. 13 Westbourne Park, London. It will be of the annual value of about £50, and tenable for three years. *See* Deed of Foundation at p. 350 of Calendar for 1876-77.

XXXIV.—LANG SCHOLARSHIPS.

This is a Bequest by the late John Lang, Esq. of Warren Park, Ayrshire, with the object of founding four Scholarships, to be called the "Lang Scholarships," one in Natural Philosophy, one in Mathematics, one in Chemistry, and one in Botany. The capital sum will be payable on the death of the survivor of two liferenters.

XXXV.—MACKAY SMITH SCHOLARSHIP IN NATURAL PHILOSOPHY.

This Scholarship is of the annual value of £25, and tenable for two years, is open for competition to Students who have attended the Class of Natural Philosophy in this University. The successful candidate is required to attend the class of Natural Philosophy, or to prosecute the study of Natural Philosophy, during at least one year of his tenure of the Scholarship, in such a way as the Senatus may direct or approve. The next award may be made in April 1900.

1898. *J. T. Young, M.A., B.Sc.*

XXXVI.—GEORGE SCOTT SCHOLARSHIP.

This Scholarship of about £32, 10s., is awarded annually (a previous holder not being ineligible for re-election), for the purpose of assisting Graduates in Arts of the University, of not more than three years' standing at the date of their election as Scholars, to travel for purposes of Study or Research. Applicants are required to state:—(1) The purpose for which they desire to use the Scholarship; and (2) What other means they have towards the object in view. The award will be based—(1) On the importance of the work to be undertaken; (2) the sufficiency of the means proposed to be applied to the work; (3) the capability of the applicant for the work he proposes to undertake. The holders are required in all cases to satisfy the Senatus, by half-yearly reports, that they are carrying out the work undertaken; and must present a final report or deliver a short Course of Lectures on their work when completed. The appointment is made by the Senatus on a report by the Faculty of Arts on the merits of the applicants. Preference will be given to Candidates desiring to undertake work in the following groups of subjects, under the following scheme of rotation, provided always that a suitable Candidate presents himself:—(1) Classical Languages and Classical Archæology; (2) Mental Philosophy; (3) Mathematical and Physical Science; (4) Semitic and Indian Languages; (5) English and Modern Languages; (6) History. See Deed of Foundation in CALENDAR for 1897-98, page 419.

1899. *Bruce M'Ewan, M.A.*, Ment. Phil.

XXXVII.—MACPHERSON SCHOLARSHIP.

This Scholarship is awarded annually by the Senatus Academicus to a student who has, within six years of the date of the competition, completed the examination necessary for the degree of Master of Arts in the University of Edinburgh, with or without honours, who has included in his examination the subjects of Latin and Greek, and who has attended the class of Celtic and attained distinction in that subject. The scholar must study Celtic in a University or other place offering special facilities for Celtic study, subject to the approval of the Senatus Academicus. The Scholarship is of the annual value of about £84, 7s. 4d., and is tenable for one year. Before 15th February next after his appointment the scholar must submit to the Senatus Academicus a report of the work he has done, and of such further studies in Celtic as he proposes to prosecute, and the Senatus Academicus may, if they think fit, appoint him to the said Scholarship for a further period of one year.

1899. *Donald Lamont, M.A.*

XXXVIII.—THE NICHOL FOUNDATION.

The free yearly interest or income derivable from this foundation, amounting to about £50, shall be paid to a deserving Student, who shall regularly attend and devote himself as assistant in the Physical Laboratory, and who shall be bound to give his whole time in promoting the study of Natural Philosophy in connection therewith. It is tenable for one year, but on the recommendation of the Professor of Natural Philosophy it may be continued for a second year or longer. It cannot be held along with any Bursary or Scholarship. See Deed of Foundation in CALENDAR for 1897-98, page 419.

XXXIX., XL.—RITCHIE SCHOLARSHIPS FOR THE STUDY OF ORIENTAL LANGUAGES.

These Scholarships, endowed by the late James Ritchie, formerly of Edinburgh, are for Candidates for the Civil Service of India. They are open annually, are each of the annual value of about £40, and tenable in the first instance for one year. They are not tenable along with any other Scholarship or Bursary without the express approval of the Senatus. Candidates must be eighteen years of age at the date of application (1st October), and they must be still eligible to compete for the Civil Service in the following August. The Scholarships will be awarded without examination, on the basis of work already done at Edinburgh University. Candidates will be expected to show evidence of some such distinctions as the following:—Second Class Honours (at least) in some department of the Faculty of Arts; a degree in Science; or Class Certificates of Merit (First Class) in three or four different subjects. The holders will be required (1) to declare their intention of competing for the Civil Service; (2) to submit from

time to time evidence of industry and progress in the subjects which they intend to offer in the Civil Service Competition. The holder of a Scholarship may offer himself again as a Candidate. He will not be debarred from entering his name for the Home as well as the India Service; and in the event of his being high enough in the list to have the option of a Home appointment, he will be free so to choose.

1898. *Alex. Flint; K. N. Knox.*

XLI.-XLII.—GEORGE HERIOT'S TRAVELLING SCHOLARSHIPS FOR TEACHERS OF MODERN LANGUAGES (MEN OR WOMEN).

These Scholarships—one for French and one for German—each of £100, and tenable for one year, are for the purpose of enabling Students who intend to devote themselves to the teaching of Modern Languages to travel abroad in order to extend their linguistic studies, and in particular, to perfect their colloquial knowledge of the language of their special study. They are awarded by Competitive Examination, which shall be combined, as far as possible, with the Degree Examination for Honours in Modern Languages. The standard of examination shall be the Honours standard, and they are open to Graduates in Arts of the University, of not more than four years' standing at the date of their election as Scholars, who have passed the Degree Examination (Honours or Ordinary) in one of the Modern Languages either before or after graduation, and have attended an Honours Class in the Language for which the Scholarship is awarded, and who have obtained the Schoolmaster's Diploma in the University, and who are, or who intend to become, Teachers of Modern Languages. Should either not be awarded in the language for which it was originally destined, two may be given for the other language mentioned, or one may be given for Italian, Spanish, or other modern language. Applications must be lodged with the Governors of George Heriot's Trust not later than 15th March in each year. Applicants must state in writing, and if required, produce other evidence that they are, or intend to become, Teachers of Modern Languages; and acceptance of a Scholarship shall be held by the Governors to be a *bona fide* engagement to enter upon such a career. A Candidate who has held one of the Scholarships shall not be eligible for re-election to another in the same language, but may be elected to one in another language. For further particulars apply to David Lewis, Esq., Treasurer, George Heriot's Trust, 20 York Place, Edinburgh.

1898. *Jessie Annie M'Kechnie, M.A.* (German).
No award in French.
1899. *James Melville, M.A.* (French).
John Lees, M.A. (German).

IV.—FELLOWSHIPS.

See note under Bursaries, p. 155.

I.—GUTHRIE FELLOWSHIP IN CLASSICAL LITERATURE.

This fellowship, founded in 1866 by James Guthrie, Esq., London, is of the annual value of £85, 15s., and is tenable for four years. By the terms of the Deed of Foundation (given at p. 210 of the CALENDAR for 1866-67) it is for proficiency in Classical Literature, and is open to Graduates in Arts of the University who have taken their Degree since the last competition. Students who have passed all their examinations for a Degree since the last competition, but have deferred graduating, are also eligible. It cannot be held along with any other Fellowship or Scholarship in a Scottish University. The next Competition may take place in April 1903.

1899. *A. B. Keith, M.A.*

II.—THE HAMILTON PHILOSOPHICAL FELLOWSHIP.

This Fellowship, founded in 1866 by the Subscribers to the fund for a Memorial to the late Professor Sir William Hamilton, and by the Association for the better endowment of the University, is of the annual value of £85, 5s., and is tenable for three years. By the Deed of Foundation (given at p. 213 of CALENDAR for 1866-67), the Fellowship is open to all Graduates in Arts of the University of Edinburgh of not more than three years' standing at the time of the competition. It cannot be held along with any other Scholarship or Fellowship in any Scottish University. The subjects of examination are Logic, Metaphysics, Moral Philosophy, and the History of Philosophy. The next Competition may take place in April 1900.

1897. *James Black Baillie, M.A.*

III.—SHAW FELLOWSHIP IN MENTAL PHILOSOPHY.

This Fellowship, founded in 1867 by Contributors to a Memorial to Sir James Shaw, Bart., a native of Ayrshire, afterwards Lord Mayor of, and M.P. for, London, and by the Association for the better endowment of the University, for the encouragement of the study of Logic, Psychology, Metaphysics, Moral Philosophy, and the History of Philosophy, is awarded after competitive examination on these subjects. It is open to Graduates in Arts of any of the four Scottish Universities, of not more than five years' standing at the time of the competition, is of the annual value of £130, 11s. 2d., and is tenable for five years. It cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University, and it is not open to the competition of any person who already holds a Fellowship in any English or Irish University, though the holder of the Shaw Fellowship will not be precluded from afterwards obtaining an

English or Irish Fellowship. The holder is required during the fourth or fifth year of his tenure of the Fellowship to deliver in this University a Course of four Lectures on any of the subjects for the encouragement of the study of which the Fellowship was founded. The next Competition for the Fellowship may take place in December 1904 at the beginning of the Christmas holidays. (Deed of Foundation, p. 237 of CALENDAR for 1868-69.)

1899. *J. B. Baillie, M.A.* (Edin.).
Prox. access., A. M. Mackay, M.A. (Aber.).

IV.-VIII. -GEORGE HERIOT RESEARCH FELLOWSHIPS.

Four Fellowships are offered annually, and applications will be entertained in each of the following three groups of study—(1) Mathematical, Physical, Experimental and Natural Science; (2) Language and Literature, including Classical Archaeology; (3) Philosophy, History, and Law. Each of these Fellowships is of the annual value of £100, is tenable for one year only, but may be renewed for a second year. They are open to Graduates and others who have attended for not less than two *academic* years at the University of Edinburgh, within the ten years immediately preceding the date of appointment (1st August.) The Fellowships are awarded by the Governors of George Heriot's Trust on a report of the Heriot Research Fellowship Committee, but the committee shall not be bound to award Fellowships in all or in any of these departments; and shall, in making their awards, have regard solely to the importance of the researches projected by the applicants, and to the likelihood of good results being obtained. Applications for Fellowships or for renewal of Fellowships should be made annually, not later than 1st June. For further particulars apply to the Governors of George Heriot's Trust, 20 York Place, Edinburgh.

1898. *D. H. MacGregor, M.A.*
J. S. Flett, M.A., B.Sc., M.B.
R. S. MacDougall, M.A., D.Sc.

ENDOWMENTS FOR RESEARCH.

I.—WILLIAM DICKSON TRAVELLING FUND.

This Fund (the interest of which amounts to about £87 per annum) has been established for the purpose of assisting Graduates of any Faculty, of not more than Three Years' standing, to travel, for a shorter or longer period, for purposes of study or research. Grants from the Fund may be made to holders of Scholarships, Bursaries, &c. Applicants are required to state "(1) The purpose for which the Applicants desire to get a Grant for travelling; (2) the total amount of expenditure thought necessary; (3) the other means they have towards meeting this expenditure; and (4) the amount of the Grant required from the Fund." The award of a grant to be based on—"(1) The importance of the

work proposed to be undertaken ; (2) the sufficiency of the means proposed to be applied to the work ; (3) the capability of the Applicants for the work they respectively propose to undertake." "Holders of Grants in all cases to satisfy the Senatus by periodical reports that they are carrying out satisfactorily the work or investigation undertaken ; and to present a final report, or to deliver a course of public University Lectures on their work when completed." Applications must be lodged with the *Secretary of Senatus* on or before 15th March annually. For Deed of Endowment, *see* p. 514 of CALENDAR, 1889-90.

II. EARL OF MORAY ENDOWMENT FOR THE PROMOTION OF ORIGINAL RESEARCH.

1. The available income is, in the first place, applied to the payment of the actual expenses of the prosecution of Original Research, present or contemplated, intended and likely to increase existing human knowledge, in any of its departments.

In such expenses would be included apparatus, special accommodation, specimens, chemical substances, books, journals, pamphlets, reproductions of manuscripts, &c., and actual maintenance and travelling expenses, in so far as they are shown to be necessary for the purposes of research, provided that it shall be permissible to furnish out of the income such specific additions to the Library as may be deemed necessary to stimulate and aid research.

All apparatus, specimens, books, journals, pamphlets, &c., and all unused chemical substances shall, at the termination of the research, be returned, or otherwise accounted for to the University.

2. Any surplus income after meeting the claims defined in 1, above, may be expended in (*a*) the printing and publishing of noteworthy results, including illustrations for papers containing such results ; and (*b*) the payment, after careful consideration of all the circumstances, of such grants of money as may be necessary to enable applicants to enter upon or carry on the work of research, or to encourage the prosecution of research.

3. All graduates and other members of the University, "or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research," are entitled to apply for assistance.

4. In so far as the subject of the research admits, the investigation shall be conducted in the buildings of the University.

5. All applications for participation in the Fund must be submitted to the appropriate Faculty before 15th March and 1st July annually. See Regulations in CALENDAR for 1897-98, page 428.

THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is in the patronage of the Trustees of the British Museum, is of the annual value of £144, and is open to Graduates in any of the Faculties in this University who have obtained their Degrees

after examination. For further particulars *see* under Faculty of Science, page 274.

FELLOWSHIPS, SCHOLARSHIPS, UNIVERSITY PRIZES, AND BURSARIES, OPEN DURING THE ACADEMIC YEAR 1899-1900.

See note under Scholarships, page 171.

Candidates for the Fellowships and Scholarships open in Spring must give their names and addresses to the Clerk of Senatus, University, Edinburgh, *on or before* 15th March 1900.[1] The Examinations will begin in the *Examination Hall*, University, at 9 o'clock on *Monday, 2nd April* 1900, unless otherwise stated, and will be continued on following days, at the same hours.

Fellowships.[2]

1. *Hamilton Fellowship in Mental Philosophy*, No. II., page 184.
2-6. *Five George Heriot Fellowships for Research*, No. IV., page 185.

Scholarships.[1 2]

See note under Scholarships, page 171.

1. *Drummond Mathematical Scholarship*, No. VIII., page 172.
2. *Sir David Baxter Mathematical Scholarship*, No. III., page 171.
3. *John Edward Baxter Scholarship in Mental Philosophy*, No. V., page 172.
4. *Vans Dunlop Scholarship in English Literature and Poetry*, No. XXIII., page 177. Examination on Friday, 30th March 1900, and following days, from 9 to 12 and 2 to 5.

The examination (which will be combined as far as possible with that for Honours) will include, besides the Class Lectures, (*a*) Independent Knowledge of the History of English Literature, and (*b*) of the following works:—

Chaucer's *Prologue* to the *Canterbury Tales; Troilus* and *Cressida; Eve of St Agnes*; Langland's *Piers the Ploweman*, Passus i.-iv.; Malory's *Morte d'Arthur*; Dunbar's Poems; Spenser's *Shepheardes Calendar* and *Faery Queene* (Books iii. and iv.); Marlowe's *Edward II.*; Shakespeare's *Tempest*, *Love's Labour's Lost*, *Winter's Tale*, *Romeo and Juliet*, *Othello*, *Cymbeline*, and *Sonnets*; Jonson's *Every Man in*

[1] The Senatus reserve power to relax this Regulation in cases where they are satisfied that very special cause has been shown.

[2] For further information, and for information regarding other Fellowships, Scholarships, Bursaries, and Prizes, see above, where full information regarding the conditions and values, &c., are given. The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise and fall of the rate of interest, &c.

his Humour; Bacon's *Essays*; Milton's *Paradise Lost*, i.-iii., *Sonnets*, and *Areopagitica*; Cowley's *Pindarique Odes*; Dryden's *Essay of Dramatic Poesy*, the *Defence of the Essay*, *The Indian Emperor*, and *Absolom and Achitophel*; Pope's *Essay on Criticism*, *Satires*, and *Epistles*; Swift's *Tale of a Tub*; Johnson's Lives of Cowley, Dryden, Pope, and Swift; Gray's Poems; Cowper's *Task*; Burns's Poems; Scott's Poems; Wordsworth's *Excursion*, Books i. and ii., *Prefaces*, *The Lyrical Ballads*; Byron's *Childe Harold*; Shelley's *Adonais*; Keats's *Hyperion*, *Endymion*; Tennyson's *Idylls of the King*; Browning's *Dramatis Personæ*.

5. *Vans Dunlop Scholarship in Classical Learning*, No. XXIV., page 177. Examination on 11th October 1899, and following days, from 9 to 12 and 2 to 5. Names to be entered on or before 19th September.[1]

The following are the subjects of Examination:—

Latin.—I. Plautus, *Captivi*. Virgil, *Aen.* iv.-ix. Lucan, *Pharsalia*, i. Tacitus, *Agricola*, and *Histories*, i., ii. II. Composition. Translation from authors not prescribed. III. General questions on Language, Literature, and History, chiefly in connection with books prescribed.

Greek.—I. (i) Homeric Hymns. (ii) Aeschylus, *Suppl.*, *Thebans*. (iii) Herodotus, vii., viii., ix. (iv) Plutarch, *Pericles*, *Nicias*, *Timoleon*. II. Translation from books not prescribed. III. Greek Prose Composition. IV. General questions on Language, Literature, and History, chiefly directed to test a knowledge of the books prescribed.

6. *Vans Dunlop Scholarship in Logic and Metaphysics*, No. XXVI., page 178. The examination will test knowledge of Philosophy, especially in the Departments of Logic, Psychology, and Metaphysics, including a special knowledge of the following books:—Sigwart's *Logic*, Vol. I.; Ward's Article on *Psychology*; James's *Principles of Psychology*; Plato's *Phaedo*; Kant's *Critique of Pure Reason*; Aristotle's *Nicom. Ethics*, Books i.-iv.; Kant's *Groundwork of the Metaphysic of Ethics*; Sidgwick's *Methods of Ethics*. Examination takes place on 11th October 1900 and following days, at 9 and 2 o'clock each day. Names to be entered on or before 19th September.[1]

7, 8. *George Heriot's Travelling Scholarships for Teachers of Modern Languages* (Men or Women), No. XLI., page 183.

9. *Macpherson Scholarship*, No. XXXVII., page 182.

The subjects of Examination are: (1) *Tochmarc Etáine* and *Serglige Conculaind* (Windisch's Irische Texte). (2) *Modern Gaelic*: Duncan MacIntyre's Poems; Ossian's Fingal, Books I.-III.; and Keating's Three Shafts of Death, Books I., II., and III. (Atkinson's Edition). (3) Translations into English from Old and Modern Gaelic Authors. (4) Translation from English into Gaelic prose (Scottish *or* Irish). (5) A general knowledge of the History of Gaelic Literature,

[1] See footnote 1, p. 187.

with more detailed knowledge of the Literature of the Scottish Highlands from A.D. 1560 to 1860. The Scholarship is awarded annually in April. Date to be afterwards announced. Names to be entered on or before 15th March.[1]

10, 11. *Two Mackay Smith Scholarships in Natural Philosophy, one* for two years and *one* for one year, No. XXXV., page 181. The Examination will take place at the same time as the Examination in Natural Philosophy for the ordinary Degree of M.A. (6th April 1900, from 9 to 11 and 11.30 to 1.30). Names of Candidates to be given in not later than 15th March.[1]

12. The *George Scott Scholarship*, No. XXXVI., page 181. The competition in 1900 will be in Mathematical and Physical Science. Names to be entered on or before 15th March.[1]

13. *Neil Arnott Scholarship for Experimental Physics*, No. XIX., page 175.

14-16. *Three Ferguson Scholarships*, No. XX., page 176.

17, 18. *Two Ritchie Scholarships*, No. XXXIX., page 182.

Funds for Special Study and Research.

1. *The William Dickson Travelling Fund*, No. I., page 185.

2. *The Earl of Moray Bequest for the Promotion of Original Research*, No. II., page 186.

Prizes.[1]

1. The *Lord Rector's Prize*, of twenty-five guineas, for the best Essay on "The Mutual Influence of England and Scotland upon each other since the Union of the Crowns in 1606." The Prize is open to Matriculated Students, and to Graduates of not more than two years' standing. Essays to be lodged with the Secretary of Senatus on or before 1st November, each Essay distinguished by a motto, and accompanied by a sealed envelope containing the name, address, and University standing of the Candidate.

2. *Scott and Dunbar Prize*, No. V., page 170.

3. *Bruce of Grangehill and Falkland's Prize*, No. III., page 169.

4. *The Elizabeth Hamilton Prize* of £5 is offered to the best Woman Student in the Class of Moral Philosophy.

5. *Neil Arnott Prize*, about £37, 10s., will, failing the appointment of a Student of Medicine, be awarded in October to the Candidate for the Degree of M.A. who has undergone with most distinction the ordinary examination in Natural Philosophy, with such additional examination in Experimental Physics as the Examiners may require.

6. *Cousin Prize in Fine Art*, No. VI., page 170.

7, 8, 9. *The Trustees of Gray's Prize Essay Fund* offer three Prizes of £15, £10, and £5 for the first, second, and third best Essays on

[1] See footnote 1, p. 187.

"The Problem of a Living Wage." No information beyond that which is conveyed in the CALENDAR will be given. Rev. A. J. B. Paterson, Duns, Secretary to the Trustees.

10, 11. *Two Newton Bursaries or Prizes*, No. LXIII., page 166.

12, 13. *The Kellaud Memorial Prize*, of about £4, 12s., will be awarded by Examination in October. The paper will be on the Higher Geometry for the John Welsh Bursaries (set on Monday, 9th October, at 9 A.M.), with such additional questions as may be deemed necessary. Students who made a complete attendance on the Junior Mathematics Class for the first time in the previous Session (1898-99) will alone be eligible to compete for the prize in October next. Names to be given in not later than 19th September.

14-16. *Three Prizes* offered by the Franco-Scottish Society. For particulars, apply to A. A. Gordon, Esq., C.A., Hon. Sec., Franco-Scottish Society, 128A George Street, Edinburgh.

Bursaries.[1]

FOR STUDENTS ENTERING THEIR FIRST YEAR.

(*For Time-Table of Examinations, see pages* 122-124.)

Bursaries in Arts heretofore tenable for four years shall continue to be so tenable, provided that, if the holders graduate after three years, they shall only retain their Bursaries during a fourth year if they shall engage in study approved by the Senatus in subjects included in the Curriculum for Degrees in Arts or in Pure Science. Bursars in Arts, subject to the provision as to the fourth year of tenure, shall attend in each year at least two classes qualifying for Graduation in Arts, and shall duly perform the work of these classes: Provided (1) that, for the purposes of this section, the classes known as Middle Classes, so long as the same exist, may be attended in place of classes qualifying for Graduation; and (2) that it shall be in the power of the Senatus, with approval of the University Court, to permit such Bursars to attend classes qualifying for Graduation in Pure Science in place of classes qualifying for Graduation in Arts. [See Ordinance No. 57.]

The Bursaries are awarded on the results of the University Bursary Examinations unless otherwise stated, and are tenable at the University of Edinburgh only. The Senatus reserve the power, under Section VIII. of Ordinance No. 57, to award not more than two First Year Bursaries in Arts in respect of exceptional distinction in any one branch of study.

For Bursary and other purposes, where the phrase "First-year's Student in Arts or Pure Science" is not by Deed of Foundation or otherwise defined, it shall mean "A Student in Arts or Pure Science who has not attended any class qualifying for Graduation in the said Faculties in any Scottish University."

[1] See footnote 2, p. 187.

The Subjects of Examination for the first year Bursaries, Nos. 1 to 15 inclusively in the following list, are the subjects prescribed for the Preliminary Examination, viz. : — English (full marks 100), Latin (100), Greek (100), Mathematics (100), French (50), German (50), Italian (50), and Dynamics (50), with additional papers in English, Latin, Greek, Mathematics, French, and German. Candidates may select not more than five subjects ; provided always that no Candidate will be credited with marks in any subject in which he has not obtained twenty-five per cent. of the total marks assigned to that subject. Those who select Latin, Greek, or Mathematics must for the Bursary Competition take the papers on these subjects on the Higher Standard. The Examination Papers are indicated in the Time-Table of Examinations by the figure 1.

Candidates for Bursaries [Nos. 16 to 19 inclusively, and others] which are not awarded by open competition must present themselves for the Preliminary Examination in Arts prescribed by the Regulations for Degrees in Arts, Section III., and no Bursary shall, except as hereinafter provided, be awarded to any Candidate who shall not have passed the Preliminary Examination in Arts (or its equivalent). But it is in the power of the Senatus, with the approval of the University Court, to admit to a Bursary in Arts not awarded by open competition a Candidate who shall have passed in at least one subject of the Preliminary Examination, on the condition that he shall not retain the Bursary unless he shall have passed in all the subjects not later than the Second Preliminary Examination after the date of his admission as Bursar. When there are more than one eligible Candidate for a restricted or preferential Bursary [Nos. 16 to 19 inclusively, and others], the Subjects of Examination are :—English (as for Arts and Science Preliminary), Lower Latin, Lower Greek, and Lower Mathematics. Candidates for the MacKinnon and Ardvorlich[1] Bursaries will in addition get Translation of an easy passage from Gaelic to English, Translation of Sentences from English to Gaelic, and Elementary Questions in Gaelic Grammar. The papers are indicated in the Time-Table of Examinations by the figure 3.

Candidates for Bursaries Nos. 1 to 20 inclusively may on and after 8th September obtain schedules at the Matriculation Office, University (Old) Buildings, which must be completed and returned to the Clerk of Senatus *on or before* 19th September. The Senatus may relax this Regulation in cases where very special cause has been shown.

Town Council Bursaries.—Candidates for Bursaries in the gift of the Town Council, a number of which are vacant, are referred to the "*City Clerk, Council Chambers*, Edinburgh," to whom early application should be made. The Examination is the same as for the University Open Bursaries.

County Clubs, and others who prefer this examination, may, by arranging with the University Court, avail themselves of the University

[1] Not open in 1899.

Examinations by giving written intimation of the names of their Candidates at the Matriculation Office not later than 19th September. Those who desire to have their Bursaries inserted in the CALENDAR, under the head of Bursaries open during the year, are requested to give intimation to the Editor of the CALENDAR before 1st January.

County Club and Private Bursaries.—Candidates for Bursaries instituted by various County Clubs are referred to the respective Secretaries of those Clubs. Information as to Private Bursaries may be obtained from the Patrons or from their Agents.

Candidates for Bursaries, unless also Candidates for the Preliminary Examination, pay no fee.

The names of the successful Candidates, and of others distinguished in the ordinary Bursary competition, will be published, in the order of merit, in the University Calendar, along with the names of the schools from which they come, provided that they have matriculated and enrolled in the necessary classes for 1899-1900.

1, 2. *Two John Welsh Classical Bursaries*, each of the annual value of £20, tenable for four years. Subjects of examination—Latin, Greek, English.

3, 4. *Two John Welsh Mathematical Bursaries*, each of the annual value of £20, tenable for four years. Subjects of examination—Mathematics, especially pure Geometry. (Candidates are recommended to read Macdonald's *Higher Geometry*, Wilson's *Solid Geometry and Conic Sections*, and Casey's *Sequel to Euclid*, as partly indicating the scope of the examination in Geometry. What will be looked for is, not so much exhaustive knowledge of all the more intricate theorems, as a thorough knowledge of such as are more elementary and fundamental in their character, and ability to apply these in fairly straightforward exercises.)

5, 6. *Two Grierson Bursaries*, one of £24 a year and one of £20 a year, if not awarded to Preferential Candidates. See Nos. 16 and 17.

7. *Tyndall Bruce Bursary*, of the annual value of £20 a year, tenable for three years.

8, 9. *Two Sibbald Bursaries*, each of the annual value of £30, tenable for three years. Apply to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh, before 15th September.

10. *Thomson Bursary*, £25 a-year, tenable for four years. Apply to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, before 15th September.

11, 12. *Two University Endowment Association Bursaries*, each of £20, and tenable for three years. They cannot be held with any other Bursary in any Scottish University.

13. *One Mann Bursary*, of about £26, 13s. 4d. a year, tenable for three years. Candidates must be sons of residents in the town of Nairn, *i.e.*, one or other of their parents must have resided within the municipal boundaries for at least twelve months at some period

prior to the competition. Should there be no qualified Candidate of the first year for this Bursary, a notice will be posted at the College gate soon after the Bursary Competition. Other Preferential Candidates must then lodge their claims within one week after the notice appears on the Board.

14. *One Jardine of Thorlieshope Bursary*, of the annual value of £35, tenable for four years. Open only to natives of the rural districts of Roxburghshire and Dumfriesshire (villages and towns with a population of 2000 and upwards being excluded) who have attended the Public or Board Schools in said Counties. The Bursars are required to attend the classes necessary for the Degree in Arts, and to take the Degree at the end of the course. In the event of there being no qualified First Year Student, the Bursary may be given to a Candidate of the previous year who does not hold a Bursary, or thrown open to competition for one year only to second, third, or fourth year Students in succession.

15. *A Maule Bursary*, of £21, 7s. 6d. a year, tenable for six years, for the maintenance and education of a poor and deserving student if he shall continue so long to prosecute his studies at the University.

16, 17. *Two Grierson Bursaries*, one of £24 and one of £20 a year, both tenable for four years—restricted in the first place to natives of the parishes of Crawford and Leadhills. If there be no Preferential Candidates, the examination will be as for Open Bursaries.

18. *Mackinnon Bursary*, of about £20 a year (under deduction of expenses), tenable for three years. Candidates must be natives of the Counties of Argyll, Bute, Inverness, Ross, or Sutherland, and must be examined in Gaelic.

19 *Johnstone of Harthope Bursary*, of about £16, 5s. a year, tenable for four years– restricted in the first place to a native of the Parishes of Moffat or Peebles (students of the names of Alexander or Johnstone having always a preference.)

20. *Renton Bursary* (not restricted to Students of the First Year), of about £20, for one year. The holder must attend one or more of the classes of Natural Philosophy, Mathematics, Chemistry, or Political Economy. Pecuniary circumstances will be taken into consideration. It cannot be held by anyone under the age of sixteen or above twenty-one, or with another Bursary of the annual value of £30 or upwards. The examination is in English and Mathematics, as for the First Year Open Bursaries. See Time-Table, pages 122-124. Names of Candidates to be entered on or before 19th September.

21. *Donald Fraser Bursary*, of £51, for high merit in the class of Natural Philosophy, combined with proficiency in Laboratory Work, is awarded annually at the end of the Winter Session.

22. *James Stewart Bursary*, of about £35, tenable, by a native of Callander or Trossachs, for three years, in any Scottish University. For particulars apply to R. Fulton, Esq., Schoolhouse, Callander, with Certificate of Birth, before 1st September.

23-29. *Seven George Heriot Bursaries for Men* will be offered for Competition to Students matriculating at the University for the first time, after having passed the Preliminary Examination for a Curriculum in Arts or Science. Each Bursary is of the annual value of £30 a year, and may be tenable for three years. Subjects of examination:—(1) Latin; (2) Mathematics; (3) English; (4) Greek; (5) French; (6) German; (7) Italian; and (8) Dynamics. Candidates may select not more than five subjects of examination. The examination papers are indicated by the figure 1 in the Time-Table of Examinations. Applications for Schedules for these Bursaries may be made to the *Governors of George Heriot's Trust*, at the Office of the Treasurer, 20 York Place, Edinburgh, on and after 15th August, and must be returned to him not later than 15th September. Candidates are required to state in their schedules of application the subjects in which they offer themselves for examination.

30-32. *Three Heriot High School Bursaries*, of £30 a year, may be tenable for three years. Regulations as in last paragraph.

33-40. *Eight George Heriot Bursaries for Women* will be offered for competition to Students matriculating at the University for the first time, after having passed the Preliminary Examination for a Curriculum in Arts or Science. Each Bursary is of the value of £30 a year, and may be tenable for three years. The subjects and conditions of the examinations are the same as for the Bursaries for men. Application to be made in the manner referred to in the previous paragraph. The examination papers are indicated by the figure 1 in the Time-Table.

41. *One George Heriot Bursary for Women* studying Medicine, for attendance at any School of Medicine for Women in Edinburgh recognised by the University Court. Each Bursary is of the value of £30 a year, and may be tenable for three years. Candidates *must pass the Preliminary Examination of the University either in Arts or Science.* They may take as many subjects in addition to those qualifying for the Preliminary Examination as they please; but should they fail to secure 25 per cent. of the marks allotted to a subject the paper will be cancelled. Application to be made in the manner referred to in the previous paragraph.

42-45. *Four George Heriot Bursaries for Women*, of £30 each, and tenable for one year, at St George's Training College, Edinburgh. Graduates *must pass the University Examination for the First Year Open Bursaries.* The subjects are:—English (full marks 100), Latin (100), Greek (100), Mathematics (100), French (50), German (50), Italian (50), and Dynamics (50), with additional papers in English, Latin, Greek, Mathematics, French,

and German. Candidates may select not more than five subjects; provided always that no Candidate will be credited with marks in any subject in which she has not obtained 25 per cent. of the total marks assigned to that subject. Those who select Latin, Greek, or Mathematics must for the Bursary Competition take the papers on these subjects on the Higher Standard. The Examination Papers are indicated in the Time-Table of Examinations by the figure 1. Women-students who hold the Cambridge University Honour or Ordinary Certificates, which are equivalent to the degrees conferred on men-students, and women-students who hold the corresponding equivalents to degrees from the University of Oxford will rank for purposes of Competition as Graduates. Non-Graduates *must pass the Preliminary Examination of the University in Arts or Science, either directly or by means of exempting Certificates.* They may take as many subjects as they please in addition to those qualifying for the Preliminary; but should they fail to secure 25 per cent. of the marks allotted to a subject, the paper will be cancelled. The marks are as follows: English, 100; Latin (Higher Grade), 100; Latin (Lower Grade), 50; Greek (Higher Grade), 100; Greek (Lower Grade), 50; Mathematics (Higher Grade), 100; Mathematics (Lower Grade), 50; French, 70; German, 70; Italian, 70; Dynamics, 50. No marks will be given for the lower paper in any subject where the higher paper in that subject is also taken. Applications for Schedules for these Bursaries may be made to the Governors of George Heriot's Trust at the Office of the Treasurer, 20 York Place, Edinburgh, on and after 15th August, and must be returned to him not later than 15th September.

46, 47. *Two Simson Bursaries*, of the annual value of £25, tenable for three years, for Students who, having passed the Preliminary Examination, are entering on the first year of the course in Arts and are studying for the Ministry of the Church of Scotland. See definition of a First-year's Student, at page 190. The Examination will be held at the end of October or beginning of November. Apply to the Rev. G. T. Jamieson, Clerk to the Presbytery of Edinburgh, The Manse, Portobello.

48. *A Macdougall Bursary*, of £30 per annum, tenable for three years. Candidates must have been born within the County or City of Perth. Students attending the Gaelic Class preferred. It cannot be held with any other Bursary or appointment yielding together upwards of £50 per annum. Apply to W. Cochrane Young, Esq., Solicitor, Perth.

49-51. *Bursaries offered by The Edinburgh Association for the University Education of Women.*

(1) *The Victoria Jubilee Bursary*, founded by His Excellency Dr Gunning, £30 for one year, to be held at Masson Hall. Open to a third year Student desiring to graduate in Arts or Science with Honours.

(2) *The Earl of Zetland's Bursary*, about £20 for one year.

(3) *The Muir Bursary*, of about £20 for two years. Open to Candidates intending to follow a profession.

These Bursaries are offered to women Candidates. The Subjects of Examination for 2 and 3 are the same as for the University First Year Open Bursaries, see page 191. They cannot be held along with any other Bursary or Scholarship whatsoever, and will be awarded to such Candidates as in the opinion of the Executive Committee best fulfil the conditions of the several trusts.

Apply to the Hon. Secretary of the Association, Miss Louisa Stevenson, 13 Randolph Crescent, Edinburgh.

52. *The Earl of Zetland Bursaries.* One of these bursaries, of the value of about £40 per annum, tenable for three years, is open for competition to First Year Students (male or female), natives, or children of parents one or both of whom have been born in or connected for a long period of years with the Islands of Orkney and Zetland. Examination as for Preferential Bursaries. The Bursar must attend the classes in the Curriculum with a view to a Degree in Arts. Apply to Messrs Dundas & Wilson, C.S., 16 St Andrew Square, Edinburgh, before 15th September.

53-56. *The Buchanan Society gives Four Bursaries annually in Arts, Science*, and *Medicine*, open to young men *and women* of the names of Buchanan, M'Millan, M'Auslan, M'Wattie, and Risk, who have not previously attended any University. The Examination is held each year in Glasgow in September, and the four competitors who gain the highest marks get the Bursaries, so that the Bursaries may be all Arts, Science, or Medicine. The Arts Bursaries are of the value of £20 annually, tenable for three years. The Science Bursaries are of the value of £30 annually, tenable for four years, and the Medical Bursaries are of the value of £35 annually, tenable for four years, but may be extended to a fifth year. All Bursaries are held subject to certain rules and regulations. For forms of application and further particulars apply to P. G. Keyden, *Secretary*, 186 West George Street, Glasgow; or to Geo. S. Buchanan, *Treasurer*, 85 Candleriggs, Glasgow.

57. *The "Students' Subscription Bursary," offered through Committee of St George's Classes.*—Bursary of £10 for one year, offered to the woman student who passes highest among members of the St George's Oral or Correspondence Classes completing the Arts Preliminary Examination in October. For further information apply to the Secretary, St George's Classes, 5 Melville Street, Edinburgh.

FOR STUDENTS ENTERING THE SECOND SESSION IN ARTS.[1]

See Time-Table of Examinations, pages 122-124.

1. *Tyndall Bruce Bursary*, £35 a year, for three years.
The subjects of examination are Latin, Greek, and Mathematics.

[1] See footnotes 1 and 2, page 187.

The following subjects are prescribed for the examinations in Latin and Greek:—*Latin*—Virgil, *Aen.*, iv. and vi.; Quintilian, *Inst. Or.*, x.; Tacitus, *Annals*, ii. *Greek*—Homer, *Odyssey*, xxi. xxii.; Æschylus, *Thebans*; Thucyd., Bk. v. Latin and Greek prose composition, and translation from books not prescribed.

2. *Patterson Bursary in Anglo-Saxon.* See below.

Names of Candidates to be entered on or before 19th September.[1]

3, 4. *Two Spence Bursaries*, each of the annual value of £30 for first year and £40 for second year of tenure, open to Students of either sex who, after passing the Preliminary Examination or examination accepted as equivalent thereto, have attended one Winter Session qualifying for graduation or its equivalent, and who intend to complete the course of study for the Degree of M.A. The Governors may award to any Bursar, if they shall be satisfied of his or her merit, a continuation Bursary of £50, tenable one year, on condition that the Bursar shall for that year attend such a Curriculum of study in any of the Faculties as the Governors may approve. The next examination will take place at Edinburgh in September or October 1899. Apply to Mr Henry A. Pattullo, Solicitor, 1 Bank Street, Dundee, Factor to the Trust, for particulars. Names to be entered on or before 1st September.

FOR STUDENTS ENTERING THE THIRD SESSION IN ARTS.[1]

See Time-Table of Examinations, pages 122-124.

1. *Horsliehill Scott Bursary*, of £33, 6s. 2d., for two years (under deduction of expenses).

2. *Harrison Bursary*, about £26, for two years (under deduction of expenses).

The subjects of examination are Classics, Mathematics, and Logic (with Psychology and History of Philosophy).

The following subjects are prescribed for the examination in Classics:—*Latin*—Virgil, *Aen.*, iv. and vi.; Horace, *Satires*, ii.; Cicero, *De Oratore*, Bk. i. *Greek*—Aeschylus, *Thebans*; Thucyd., Bk. v. Latin and Greek prose composition, and translation from books not prescribed.

No special books prescribed for Mathematics, or for Logic with Psychology and History of Philosophy. Candidates should revise the lectures and text-books in these classes.

3. *Patterson Bursary in Anglo-Saxon Grammar and Literature*, of £16, 2s. 4d. a year, tenable for two years, and open to all students in their second, third, or fourth year of Matriculation who have attended the Class of English Literature. The holder must produce a Certificate of attendance on the Honours Course in English Language in the First Session after his appointment. The Examination will be on—

(1) *Literature.*—The Class Lectures; Ten Brink's *Early English Literature*, Vol. I., Bk. i., transl. by Kennedy; Stopford Brooke's *History of Early English Literature* (i. and ii.).

1 See footnotes 1 and 2, p. 187.

(2) *Language.*—Old English Grammar, as treated in Sievers's *Old English Grammar*, ed. Cook; the "Grammatical Introduction" to Sweet's *Old English Reader* (Clar. Press); Morris and Kellner's *Historical Outlines of English Accidence*; and Kellner's *Historical Outlines of English Syntax*.

(3) *Prescribed Reading.*—*The Chronicle*, A.D. 899-1001, in the Parker Text (ed. Plummer); selections from Ælfred's "Orosius," Ælfred's "Beda," and Ælfric's "Life of King Oswald," printed in Sweet's *Old English Reader*; *The Wanderer* (Grein, ed. Wülcker, I., p. 284; Sweet's *Reader*, p. 177); *Beowulf*, l. 1251—l. 1887, Siȝon þa to slæpe., . . . se þe oft manezum scod (Grein, ed. Wülcker I., pp. 159-219).

(4) An unseen passage for translation into modern English.

Names of Candidates to be announced at the *Matriculation Office, University, Edinburgh*, not later than the 19th September 1899.[1]

The attention of all Bursars in the Faculty of Arts is particularly called to the following regulation:—

"Bursars in the Faculty of Arts (to whose Bursaries special conditions are not attached) must annually attend at least two of the Classes necessary for the Degree of Master of Arts, and must present themselves at the Examinations necessary for that Degree.

"Each Bursar must present a Certificate, signed by the Dean, attesting his regular attendance on the proper Classes in the Faculty of Arts, on each occasion on which he applies to the Factor for a payment."

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Arts*, after 14th November; also at the end of the Session. In applying to the Dean for the Certificate in November, Bursars must present their Class Cards for the Session; and at the end of the Session they must present certificates from the Professors that they have attended with regularity and made progress in their studies. Payments are made by the University Factor, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 14th November for the Martinmas payments, and on and after 18th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

G. CHRYSTAL, LL.D.,
Dean of the Faculty of Arts, and Professor of Mathematics.

[1] See footnotes 1 and 2, page 187.

Faculty of Science.

Dean—PROFESSOR GEIKIE, D.C.L., LL.D.

Students who do not intend to graduate may attend any of the Classes on payment of the Matriculation and the Class Fees, without having passed any Preliminary Examination. Attendance on any Class with a view to Graduation in Pure Science will not qualify unless the whole Preliminary Examination has been previously passed. Those who intend to graduate in Engineering or in Agriculture must pass the Preliminary Examination before they present themselves for any part of the First Science Examination, but not necessarily before entering on the Curriculum. The Classes in the Faculty, except a few in which arrangements have not yet been made, are now open to women.

Programme of Classes.

WINTER SESSION, 1899-1900.

The Classes meet daily (Saturdays excepted), unless otherwise stated:—

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1]
Junior Mathematics...	17 Oct., 12 o'cl.	Prof. Chrystal	£3 3
Senior Mathematics[4]..	17 Oct., 9 ,,		3 3
Mathematics (Intermediate Honours)	18 Oct., 11 ,,		3 3
Do. (Advanced Honours).....	18 Oct., 10 ,,		3 3
Zoology (Elementary)	17 Oct., 12 ,,	Prof. Ewart	4 4
Practical Zoology (Elementary).....	17 Oct., 11 ,,		2 2[2]
Advanced Zoological Laboratory ...	... ...		...
Morphology of Vertebrates (with Laboratory work)	18 Oct., 2 ,,	J. Beard, D.Sc...	3 3[2]
Comparative Embryology.....	10 Jan., 2 ,,		3 3[2]

[1] Fees for second and subsequent attendances, see page 203.
[2] Besides charge of 10s. for Laboratory Expenses.
[3] Five Shillings University Entrance Fee for non-matriculated Students.
[4] The first half up to Christmas qualifies as a First Half-Course, and the second half from Christmas to the end of the Session as a Second Half-Course. *Any* First Half-Course, along with *any* Second Half-Course, taken subsequently, qualifies as a full Course for Graduation.

Classes.	Days of Opening and Hours of Attendance	Professors and Lecturers.	Class Fees.[1]
Botany (Advanced)	17 Oct., 11 o'cl	Prof. B. Balfour	£3 3[2]
Prac. Bot. Advanced	17 Oct., 11 ,,		2 2[2]
Plant Physiology	17 Oct., 10 ,,	A. W. Borthwick, B.Sc.	2 2[2]
Natural Philosophy	17 Oct., 11 ,,	Prof. Tait	3 3
Do. (Advanced Honours)	25 Oct., 12 ,,		3 3
Physical Laboratory	23 Oct., 10 ,,		2 2
Natural Philosophy (Intermediate Honours Course) (*Mon., Wed., Fri.*)	18 Oct., 9 ,,	Cargill G. Knott, D.Sc	3 3
Dynamics (Advanced Science Course) (*Mon., Wed., Fri.*)	18 Oct., 10 ,,		3 3
Chemistry	17 Oct., 10 ,,	Prof. Crum Brown	4 4
Practical Chemistry	27 Nov., 11&2,		3 3
Chemistry (Advanced Course)	9 Jan., 4 ,, (*Tu. Wed. & Th.*)		2 2
Chemical Laboratories[5]	17 Oct., 9.30 ,,		...
Astronomy (*Mon., Tues. Wed. Thurs.*)	18 Oct., 4 ,,	Prof. Copeland	3 3
Anatomy	17 Oct., 1 ,,	Prof. Sir William Turner	4 4
Practical Anatomy	2 Oct., *daily.*		3 3
Regional Anatomy (Anatomical Demonstrations)	18 Oct., 4 o'cl.	David Hepburn, M.D.	2 2[3]
Physiology	17 Oct., 10 ,,	Prof.[8]	4 4
Practical Physiology	18 Oct., 3 ,,		3 3
Physiological Chemistry[7] (Second Course)			1 1
Do. do. (Advanced)	23 Oct., 11 ,,	E. W. Carlier, M.D. T. H. Milroy, M.D.	4 4
Geology & Mineralogy	17 Oct., 4 ,,	Prof. Geikie	4 4
Prac. Class[4] (*Mon., Wed., & Fri.*)	20 Oct., 2-4 ,,		3 3[4]
Engineering	31 Oct., 9 ,,	Prof. Armstrong	4 4
San. Eng. & Build. Constr. relative to Pub. Health	7 Nov., 10 ,,		2 2
Public Health and Sanitary Science	*In Summer only.*	Prof. Hunter Stewart	4 4
Do. Laboratory[6]	3 Oct., *daily.*		4 4

[1] Fees for second and subsequent attendances, see page 203.
[2] Besides Garden Fee of Five Shillings.
[3] When taken along with Practical Anatomy, £1, 1s.
[4] First part of this Course up to Christmas qualifies as a Half-Course for Graduation in Arts. Fee, £2, 2s.
[5] For fees, &c., see footnote 1, page 205.
[6] Fees :—Winter Session, £10 10s. ; Summer Session, £6, 6s.
[7] For Students who have not previously attended Practical Physiology in this University, £2, 2s.
[8] Vacant at date of going to Press.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1]
			£ s.
Engineering (short additional Course: Applied Mech.)...	18 Oct., 9 o'cl.		1 1[6]
Geomet. and Mech. Drawing.....	2 Nov. 10 to 2 ,,	W. Hume Kerr, M.A., B.Sc....	2 2
Lectures (*Mon. & Thur.*).....	20 Nov., 12 ,,		
Drawing in its relation to Public Health.....	3 Nov., 11 ,,		2 2
Agriculture and Rural Economy..	17 Oct., 9 ,,	Prof. Wallace ..	4 4
Economics as applied to Agriculture (*The Political Economy Class in Arts till Christmas*)	17 Oct., 5 ,,	Prof. Nicholson	2 2
Agricultural Chemistry.....	17 Oct., 3 ,,	A. P. Aitken, D.Sc.....	3 3
Do. Advanced Laboratory Class..	17 Oct., 12-3 ,, (*Tu. & Th.*)		4 4[5]
Forestry.....	17 Oct., 10 ,,	Col. Bailey, R.E.	3 3[2]
Agricultural Entomology (Twenty Lectures).....	9 Jan., 2 ,,	W. Fream, LL.D., B.Sc. (Lond.)	2 2[2 3]

SUMMER SESSION, 1900.

The Classes meet daily (*Saturdays excepted*), *unless otherwise stated.*

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1]
			£ s.
Senior Mathematics (First Graduation Half-Course)[4].....	1 May, 11 o'cl.	Chas. Tweedie, M.A., B.Sc.	2 2
Senior Mathematics (Second Graduation Half-Course)[4].....	1 May, 12 ,,		2 2

[1] Fees for second and subsequent attendances, see page 203.

[2] Five Shillings University Entrance Fee for non-matriculated Students, unless taken with a view to Graduation in Agriculture.

[3] Free to all present and past Students of the Agriculture Class.

[4] For Regulations as to Half-Courses, see footnote 4, page 199.

[5] On payment of this fee, students who have already attended the Ordinary Class will be readmitted to that class.

[6] No Fee for Students of class of Systematic Engineering.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1] £ s.
Honours Mathematics (Graduation Half-Course)..	1 May, 10 o'cl.	Chas. Tweedie, M.A., B.Sc.	2 2
Physics (*mainly for Students of Medicine*)	1 May, 12 ,,	Prof. Tait..... ...	3 3
Physical Laboratory ...	1 May, 10 ,,	Prof. Tait and Assistant.....	2 2
Elementary Dynamics	1 May, 9 ,,	C. G. Knott, D.Sc.	2 2
Advanced Experimental Physics.	1 May, 10 ,,	W. Peddie, D.Sc.	2 2
Chemistry (Organic).	1 May, 1 ,,	Prof. Crum Brown.....	2 2
Do. (Practical)... ...	1 May, 2 ,,		3 3
Chemical Laboratories[5]	1 May, 9.30 ,,		...
Chemical Theory (*Mon. & Fri.*)	4 May, 10 ,,	Leonard Dobbin, Ph.D.	1 1
Mineralogy and Crystallography	2 May, 9 ,,	Hugh Marshall, D.Sc.....	2 2
Astronomy (Advanced) (*Tues. & Fri.*).....	1 May, 11 ,,	Prof. Copeland....	2 2
Practical Anatomy.....	1 May, *daily.*	Prof. Sir W. Turner and Demonstrators	2 2
Anthropology.....	8 May, 2 o'cl.		2 2[2]
Regional Anatomy (Anatomical Demonstrations).....	2 May, 11 *daily.*	David Hepburn, M.D..	...
Practical Physiology...	1 May, *several hours.*	Prof.[8]	3 3
Physiological Chemistry (Second Course).			1 1[7]
Do. (Advanced Class)	*In Winter only.*	E. W. Carlier, M.D. T. H. Milroy, M.D.	4 4
Geology (*Mon., Wed., Fri.*).....	2 May, 4 o'cl.	Prof. Geikie,....	3 3[3]
Field Demonstrations on *Saturdays.*	... ...		...
Petrology (*Mon., Wed., Fri.*).....	2 May, 10-12 ,,	J. S. Flett, M.A., B.Sc., M.B., C.M.	2 2
Zoology (Elementary).	1 May, 12 ,,	Prof. Ewart.....	4 4
Do. (Elementary Practical).....	1 May,[6] ,,		2 2[4]

[1] Fee for second or subsequent attendances, see page 203.
[2] When taken with Practical Anatomy, £1, 1s.
[3] This Course qualifies as a Half-Course for Graduation in Arts.
[4] Besides charge of 10s. for Laboratory Expenses.
[5] For Fees, &c., see footnote 1, page 205.
[6] At hours to be arranged.
[7] Fee for Students who have not previously attended Practical Physiology in this University, £2, 2s.
[8] Vacant at date of going to Press.

Classes.	Days of Opening and Hours of Attendance.	Professors and Lecturers.	Class Fees.[1]
			£ s.
Invertebrate Zoology ..	1 May, o'cl.	Prof. Ewart.....	2 2
Do. (with Lab. Work)			3 3[2]
Natural History Laboratory.....	1 May, 2 ,,		6 6
Botany	1 May, 8 ,,	Prof. Bayley Balfour.....	4 4[3]
Practical Botany.....	1 May, 9 ,,		2 2[3]
Field Demonstrations on *Saturdays*	... ...		...
Plant Physiology	2 May, 2 ,,	A. W. Borthwick, B.Sc.	2 2[3]
Engineering Field-Work (Surveying, Levelling, &c.)[4].....		Prof. Armstrong...	3 3
Public Health and Sanitary Science.....	1 May, 3 o'cl.	Prof. Hunter Stewart.....	4 4
Do. Laboratory[5].....	1 May *daily*.		6 6

FEES FOR SECOND OR SUBSEQUENT ATTENDANCES.

1. *Lecture Courses*, which qualify alike for Graduation in Science and Medicine: Second attendances on £4, 4s. Courses, £3, 3s.; on £3, 3s. Courses, £2, 2s.; subsequent attendances free: second attendances on £2, 2s. Courses, no reduction; third or subsequent attendances, £1, 1s. Perpetual Tickets for initial payment, £6, 6s. No reduction for re-attendances on Practical Classes or Laboratories.

2. *Lecture Courses* which qualify both for Arts and Science: Second attendances on £4, 4s. Courses, £3, 3s.; third or subsequent attendances, £1, 1s.; second attendances on £3, 3s. Courses, £2, 2s.; third or subsequent attendances, £1, 1s.; second attendances on £2, 2s. Lecture Courses (not being Honours Half-Courses for M.A.), £1, 11s. 6d.; third or subsequent attendances, £1, 1s.; Lecture Courses, when fee for first attendance is less than £2, 2s., no reduction. Full Courses (being also Honours Courses for M.A.), second attendances, no reduction; third or subsequent attendances, £2, 2s.; second attendances on £2, 2s. Courses (being also Half Honours Courses for M.A.), no reduction; third or subsequent attendances, £1, 1s.

3. *Lecture Courses* not included in the curricula in Arts or Medicine: Second attendances on £3, 3s. Courses, no reduction; third or sub-

[1] Fees for second or subsequent attendances, see above.
[2] Besides charge of 10s. for Laboratory Expenses.
[3] Besides Garden Fee of 5s.
[4] Given in alternate Summers. Next Course in 1901.
[5] Fee for Summer Session, £6, 6s.

sequent attendances, £2, 2s.; on £2, 2s. Courses, second attendances, no reduction; third or subsequent attendances, £1, 1s. On Agriculture and Rural Economy, second attendance, £3, 3s. Perpetual Ticket by initial payment, £6, 6s.

4. *Courses in Engineering and Drawing.* No reduction for second or subsequent attendances.

5. *Practical Classes and Laboratory Courses.* No reduction for re-attendances.

MATRICULATION FEES, &c. See pages 27-30.

CLASS SESSIONS.

There are Two Sessions in each year, viz.:—

I. The Winter Session, which opens on 17th October 1899, and closes on 30th March 1900. Practical Anatomy begins 2nd October; Public Health Laboratory work begins 3rd October.

The Classes meet for the last time before the Christmas Vacation on Friday, 22nd December 1899, and re-assemble on Tuesday, 9th January 1900.

II. The Summer Session opens on the 1st May, and closes on the 20th of July 1900.

The Graduation Ceremonials take place on Saturday, 14th April and 28th July 1900.

The following means are afforded for Practical Instruction:—

I. LABORATORIES.

PHYSICAL LABORATORY, affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, daily from 10 to 3, under Professor Tait.

GEOLOGICAL AND PETROLOGICAL LABORATORY, for practical instruction in the study of Minerals, Rocks, and Fossils, and the methods of plotting and drawing geological maps and sections, on Monday, Wednesday, and Friday from 2 to 4, under the Professor, assisted by J. S. Flett, M.A., M.B., C.M., B.Sc.

ENGINEERING DRAWING CLASS ROOM, daily during the Winter Session, from 10 to 2, for instruction in drawing and drawing-office routine.

THE ENGINEERING (FULTON) LABORATORY, open on fixed days during the Winter Session, for practical instruction in the processes employed by the Engineer in the Experimental Determination of the Physical and Economical Constants of Materials, Machines, and Prime Movers, and in the Practical Applications of Electricity.[1]

PRACTICAL INSTRUCTION IN OFFICE AND FIELD-WORK, daily (in alternate years), in connection with the Summer Course on Surveying, Levelling, &c., from 11 to 4.

AGRICULTURE DEPARTMENT in the Museum of Science and Art,

[1] Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

open daily to Students attending the Agriculture Class. Excursions to farms are made on Saturdays. The leading agricultural newspapers are left for the use of Students in the Agriculture Lecture Room.

ROYAL OBSERVATORY, open to Students of Astronomy on Friday evening, from 8 P.M.

ROYAL BOTANIC GARDEN LABORATORY at the ROYAL BOTANIC GARDEN, open daily for the practical study of plants and for research, under the Professor, assisted by J. H. Burrage, M.A., and A. W. Borthwick, B.Sc.

PHYSIOLOGICAL LABORATORY, for Physiological Research, and the study of Practical Physiology, open daily, under the Professor, assisted by E. W. Carlier, M.D., B.Sc. ; T. H. Milroy, M.D., B.Sc. ; and

The CHEMICAL LABORATORIES (distinct from the Practical Chemistry Class Room) have accommodation for forty Students. They contain the necessary equipment for a complete course of instruction in the various branches of Chemical Work and for Research. The instruction given includes Complex Qualitative Analysis, Quantitative, Inorganic, and Organic Analysis (with special courses in Gas Analysis, Assaying, &c.), and Chemical Preparations. The training is suited not only for Students studying for Science and Arts Degrees, or for the Examinations of the Institute of Chemistry, but also for persons desiring to qualify themselves as Analysts, Technical Chemists, &c.

The Laboratories[1] are open from 9.30 to 4.30 daily, during the Winter and Summer Sessions, and are under the charge of Professor Crum Brown, assisted by Leonard Dobbin, Ph.D. ; Hugh Marshall, D.Sc. ; J. P. Longstaff ; and J. W. Eastham, B.Sc.

DISSECTING ROOMS, open daily under Professor Sir William Turner, assisted by David Hepburn, M.D. ; E. J. H. Fraser, M.B., C.M. ; David Waterston, M.B., C.M. : B. C. R. Aldren, M.B., Ch.B. ; and other assistants. Opens 2nd October 1899 and 1st May 1900.

NATURAL HISTORY LABORATORIES, for research and for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the Professor, assisted by J. Beard, D.Sc. ; and Gregg Wilson, M.A., D.Sc.[2]

PUBLIC HEALTH LABORATORY, for Laboratory Work for Candidates for qualifications in Public Health and for Hygienic investigation, comprising a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the Professor, assisted by J. Buchanan Young, M.B., D.Sc. Opens 3rd October 1899 and 1st May 1900.[2]

II. MUSEUMS. See pages 54-57.

[1] Fees for Chemical Laboratory.—*Whole-day*—Winter Session, £10, 10s., Oct.-Dec., Jan.-March ; or Summer Session, £5, 5s. *Half-day*—Winter Session, £6, 6s., Oct.-Dec., Jan.-March ; or Summer Session, £3, 3s. Preference will be given to Students in the above order. Students who are not Matriculated may attend the Chemical Laboratory on payment of the entrance fee of 5s. in addition to the Laboratory fees.

[2] Fees—Winter Session, £10, 10s. ; Summer Session, £6, 6s.

Courses of Lectures.

1899-1900.

I.—PURE SCIENCE.

I. MATHEMATICS.

PROFESSOR CHRYSTAL.

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

For Synopses of Lectures, see under Faculty of Arts.

II. ZOOLOGY, including COMPARATIVE ANATOMY.

PROFESSOR EWART.

For Synopses of Lectures on Zoology and of Courses on Practical Zoology, see under Faculty of Medicine.

COMPARATIVE EMBRYOLOGY.

J. BEARD, D.Sc., *Lecturer.*

The Course consists of Lectures and Practical Work.

Lectures.—The following subjects will be dealt with: Conjugation and sexual reproduction, the maturation, &c., of the egg and spermatozoan, the modes of formation of the germinal layers in a series of selected types, the development of Scyllium or Raja, Amphioxus and Rana as a basis for general Vertebrate Embryology, the organogeny of the chief systems of organs in the Vertebrata, the evolution and comparative development of the placenta. A few lectures will be given on the general principles and theory of Comparative Embryology, the recapitulation theory, and the nature of larval forms.

Practical Work.—Each member of the Class will have an opportunity of preparing for himself and studying a series of preparations to illustrate the development of Salmo, Rana, Gallus, and other forms. In addition, an extensive series of preparations of Raja, Scyllium, Torpedo, and Lacerta, &c., and of certain Invertebrate forms will be available.

In the Laboratory Work members of the Class may confine their studies to one particular type, or to some selected branch, such as Mammalian Embryology.

Books for reference. Marshall's "Vertebrate Embryology"; Hertwig's "Embryology of Man and the Higher Vertebrates"; Korschelt und Heider's "Vergleichende Embryologie der Wirbellosenthiere"; Willey's "Amphioxus"; and E. B. Wilson's "The Cell."

MORPHOLOGY OF THE VERTEBRATA.

A Course of twenty-five Lectures on the Morphology of the Vertebrata; the nervous system and its sense organs and the genito-urinary system receiving particular attention.

As far as time permits the question as to the morphological nature of the vertebrate head and skeleton will be discussed.

III. BOTANY.

PROFESSOR BAYLEY BALFOUR.

For Synopsis of Lectures, see under Faculty of Medicine.

PLANT PHYSIOLOGY (ADVANCED)

A. W. BORTHWICK, B.Sc., *Lecturer.*

This Course will be given at the Royal Botanic Garden both in the Winter and the Summer Sessions. It will consist of Lectures and Practical Demonstrations, supplementary to the Lectures of the Professor. The Processes in Plant Nutrition, Assimilation, and Respiration, the Irritability and Movements of Plant Organs, and the Physiology of the Reproductive Process in Plants will be treated.

IV. NATURAL PHILOSOPHY.

PROFESSOR TAIT.

C. G. KNOTT, D.Sc., *Lecturer on Applied Mathematics.*

ELEMENTARY DYNAMICS.

C. G. KNOTT, D.Sc., *Lecturer.*

ADVANCED EXPERIMENTAL PHYSICS.

WILLIAM PEDDIE, D.Sc., *Lecturer.*

For Synopses of Courses, see under Faculty of Arts.

V. CHEMISTRY.

PROFESSOR CRUM BROWN.

For Synopses of Courses, see under Faculty of Medicine.

ORGANIC CHEMISTRY.

This Class meets daily during the Summer Session at 1 P.M.

ADVANCED CHEMISTRY.

Course of twenty-five Lectures to begin after Christmas. Subject for 1899-1900, "Organic Alkaloids."

CHEMICAL THEORY.

LEONARD DOBBIN, PH.D., *Lecturer.*

The subjects will vary from year to year. They will include historical matters, and discussions of the more important chemical theories which are at present productive or which have been superseded. The Class will meet on Mondays and Fridays at 10 A.M., during the Summer Session. The Subject proposed for 1900 is, "A Review of Scheele's Chemical Papers and of his Theoretical Opinions."—Fee, £1, 1s.

MINERALOGY AND CRYSTALLOGRAPHY (ADVANCED).

HUGH MARSHALL, D.SC., *Lecturer.*

Daily, at 9 A.M., beginning Wednesday, 2nd May. Fee, £2, 2s.

The earlier part of the Course will be on Physical Crystallography generally, including the optical and other properties of crystalline substances and the geometrical properties of crystals. The latter section will deal specially with minerals, with those parts of Systematic Mineralogy not included in the earlier section, and with the Descriptive Mineralogy of minerals of most importance from a Geological or a Chemical point of view. Some of the meetings will be devoted to Elementary Practical Work and Demonstrations.

VI. ASTRONOMY.

PROFESSOR COPELAND.

For Synopsis, see under Faculty of Arts.

An Advanced Practical Course, consisting of thirty meetings of two hours each, may be held in Summer.

PRACTICAL ASTRONOMY (ADVANCED SUMMER CLASS).

This Class will only be held if a sufficient number of Students present themselves. It will meet at the Royal Observatory, Blackford Hill, on Tuesdays and Fridays in the Summer Session. Evening hours will also be arranged to suit the progress of the work.

VII. HUMAN ANATOMY, including ANTHROPOLOGY.

PROFESSOR SIR WILLIAM TURNER.

For full Synopsis of Lectures on Anatomy and for Course of Practical Anatomy, see under Faculty of Medicine.

ANTHROPOLOGY.

If a sufficient number of Students express their intention of selecting Human Anatomy, including Anthropology, as a subject for the Degree of B.Sc., the Professor of Anatomy will deliver, during the Summer Session, a course of twenty-five Lectures on Physical Anthropology. Fee, £2, 2s.; or for Students who take the Summer Course of Practical Anatomy, £1, 1s.

VIII. PHYSIOLOGY.

PROFESSOR [1]

For Synopsis of Lectures, see under Faculty of Medicine.

ADVANCED PRACTICAL PHYSIOLOGY.

E. W. CARLIER, M.D., B.Sc.,
T. H. MILROY, M.D., B.Sc., } *Lecturers.*

This Course is devoted to Experimental and Chemical Physiology and Histology of a more advanced nature than that of the ordinary course of Practical Physiology.

1. The Experimental part embraces the Experimental Physiology of muscle and nerve; the heart and circulation; respiration; central nervous system; organs of sense and voice.

2. The Chemical part embraces the analysis of organic substances found in tissues of animal body. The chemical examination of the blood; the digestive fluids and their actions; the liver and its secretions; milk; muscle; and urine. The Pathological as well as Physiological Chemistry of the above is taken into account.

[1] Vacant at date of going to Press.

3. The Histological part embraces the advanced study of the structure of various tissues and organs as revealed by recent methods of research of a refined character.

This Course is adapted for those preparing for examinations in Natural Science and Honours Examinations in Physiology, and for those who may afterwards desire to prosecute Physiological Research.

The Class meets for two hours twice a week in the Winter Session, beginning in October and extending to March.

IX. GEOLOGY, including MINERALOGY.

PROFESSOR GEIKIE.

Winter Course.

I. CLASS OF GEOLOGY AND MINERALOGY.—Daily, at 4 o'clock. The Course embraces :—

1. *The History of Geology* –An outline of the growth of the science from the time of the early cosmogonies downwards.

2. *Dynamical Geology*—A discussion of the nature and causes of geological changes effected on the surface and within the interior of the earth.

3. *Mineralogy*—An account of the physical and chemical characters of minerals, and a description of some of the more important and typical species in the various mineral groups.

4. *Petrology*—A description of the various families of rocks.

5. *Structural Geology* –A description of the geological structure and relations of rock-masses to each other.

6. *Palæontological Geology*—An account of the nature and use of fossils in geological inquiry.

7. *Palæontology*—A description of the more important types of life represented by fossils.

8. *Historical Geology*—The history of the successive geological periods.

9. *Physiographical Geology*—An inquiry into the origin of the present outlines of the earth's surface.

Text-Books—"Outlines of Geology," by the Professor (*Stanford*); Hatch's "Mineralogy" (*Whittaker*); Hatch's "Petrology" (*Sonnenschein*) or Harker's "Petrology for Students" (*Cam-*

bridge University Press). More detailed works of reference, most of which are in the College Reading-Room, are recommended for each branch of the lectures.

II. CLASS OF PRACTICAL MINERALOGY AND GEOLOGY.—Two hours (2 to 4), on Mondays, Wednesdays and Fridays, under superintendence of the Professor. This Course, up to Christmas, is a half-Course qualifying for Graduation in Arts.

III. FIELD DEMONSTRATIONS.—Short excursions are made on Saturdays to places of geological interest near Edinburgh, when the Class Lectures are illustrated by demonstrations in the field, and practical instruction is given in Geological Surveying. At the close of the Session (usually in the last week of April) an excursion, of about a week, may be made for the purpose of examining the structure of a more distant district.

These Field Demonstrations are open to Students attending either the Class Lectures or the Practical Class.

Adjoining the Class-room is a small Museum exhibiting the characters of minerals and rocks, and the typical fossils of the different geological systems.

Summer Course.

The following subjects are dealt with in this Course :—

1. *Petrology.*—(The lectures are illustrated by demonstrations in the Laboratory and the Class Museum.)

2. *Palæontological Geology.*—(Class Museum, see above.)

3. *Structural Geology.*—Under this head *Dynamical Geology* is also discussed in more or less detail.

4. *Geological Surveying.*

5. *Economic Geology: application of Geology to Mining, Engineering, Agriculture, Public Health, &c.*

6. *Physiographical Geology.*

Structural and *Field Geology* form the principal portion of this Course, but no previous knowledge of Geology is required of the student—the elementary principles of the science being set forth both in the lecture-room and the field. The Class meets on Mondays, Wednesdays, and Fridays at 4, and a series of practical lessons on the study of rocks will be given at the beginning of the Session on Tuesdays and Thursdays at

the same hour. The Saturdays are devoted to field demonstrations, when the mode of geological mapping and section drawing is explained and illustrated. This Course is a Half-Course qualifying for Graduation in Arts.

PETROLOGY.

J. S. FLETT, M.A., B.Sc., M.B., C.M., *Lecturer.*

Lectures and Practical Work, on Mondays, Wednesdays, and Fridays, from 10 to 12, in Summer.

II.—APPLIED SCIENCE.

I.—ENGINEERING.

I. MATHEMATICS.

PROFESSOR CHRYSTAL.

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

For Synopses of Lectures, see under Faculty of Arts.

II. NATURAL PHILOSOPHY.

PROFESSOR TAIT.

For Synopsis of Lectures, see under Faculty of Arts.

III. CHEMISTRY.

PROFESSOR CRUM BROWN.

For Synopsis of Courses, see under Faculty of Medicine.

IV. DRAWING AND MENSURATION.

W. HUME KERR, M.A., B.Sc., *Lecturer.*

CLASS OF DRAWING (GEOMETRICAL, ENGINEERING, AND ARCHITECTURAL), AND OF MENSURATION.—Students may attend at any time between 10 A.M. and 2 P.M. each day.

All Students are recommended to take the Classes in Engineering and Drawing together.

The Class in Drawing may also be attended with advantage by those who propose subsequently to attend the Class in Engineering, as Students should be able to readily understand mechanical diagrams, and to apply the graphic methods of calculation frequently employed by Engineers. The Class will be found useful also to those who propose to become architects or surveyors.

A course of instruction has been specially arranged to meet the requirements for the Degree of B.Sc. in Public Health. [See under Public Health, p. 220].

SYNOPSIS.

Ordinary Class.

The work is arranged so as to form a Two Years' Course, and will consist of Lectures and Practical Instruction in Drawing. The Courses are described as "Junior" and "Senior"; and, though not imperative, it is desirable that they should be taken in their natural order.

Junior Course:—Plane Geometrical Drawing—Construction of Curves—Design of Toothed Wheels and Gearing—Graphic Calculation and Graphic Methods of determining Stress in Structures—*Loci* of Points in Link-work—Diagrams of Velocity, Acceleration, Work, and Energy.—(Course for Session 1899-1900.)

Senior Course:—Solid Geometry—Interpenetration and Development of Surfaces and Solids—Isometric Projection—Perspective—Structural and Machine Drawing—Rough Sketching of Machines, &c., and the Preparation therefrom of Working Drawings—Design of Structures in Masonry, Timber, Steel, and Iron,—Roofs, Bridges, Skew Arches, &c.—General Machine Design.

V. ENGINEERING.

PROFESSOR ARMSTRONG.

Winter Session.

I. CLASS OF ENGINEERING.—The object of the Course will be to show the practical application of Science to some branches of Engineering. The Lectures, combined with Laboratory instruction, will form a Two Years' Course, so arranged that Students can enter the Class at the beginning of either year. The following are the subdivisions of the complete Course, a part only of each subdivision being dealt with each year:—

1. Applied Mechanics; 2. One Branch of Civil Engineering; 3. One Branch of Mechanical Engineering; 4. Ex-

amples of the Application of Machinery to Manufacturing Purposes; 5. Laboratory instruction in connection with one of the foregoing.

Synopsis of the Course for the present Session: -

A.

1. Hydrostatics and Hydrokinetics.
2. Rivers, Canals, Harbours, Docks, and Breakwaters.
3. Water Works for the Supply of Power.
4. Drainage, Sewerage, and Sewage Disposal Works; Ventilation, Warming and other Sanitary Works.
5. Water Wheels, Turbines, and Pumps.
6. Efficiency of various modes of Transmitting Power.

B.

7. The Steam Engine and Steam Engine Testing, with Laboratory Demonstrations, under the superintendence of the Professor.

Four Examinations are held during the Session; and each week, unless there be an Examination, a problem paper is set to be worked at home. The questions proposed are such as are met with in the practice of Engineering; and the answers, being returned to the Students annotated and corrected, form a body of Examples for subsequent reference.

There is also a Tutorial Class held weekly at which the questions set in the problem paper of the previous week are discussed and explained.

Engineering Works and Factories are, from time to time, visited by the Class, under the direction of the Professor.

The attention of Students proposing to follow the foregoing Course is specially directed to the following Class (II.), one attendance at which, though optional, is strongly recommended.

II. ADDITIONAL CLASS. — A short preliminary course in General Mechanics is given, *without additional fee*, for the benefit of those entering the Class of Systematic Engineering with an imperfect knowledge of Mechanical principles. This Class, taught by an assistant, will meet five days a week for

about a month, commencing on the same day as the General Science Classes open.

III. A Course of Instruction in Sanitary Engineering and Building Construction, designed for Candidates for Degrees in Public Health, and consisting of about fifty Lectures. See under Public Health, p. 220.

IV. The Fulton Engineering Laboratory.—Students here receive practical instruction in the processes employed by the Engineer in the experimental determination of the physical and economical constants of materials, machines, and prime movers, and in the practical application of electricity.

Summer Session.

V. Engineering Field-Work.—A course of Practical Instruction in Surveying, Levelling, Setting Out, and Calculation of Quantities, is given in alternate years.

The Course consists of lectures, and of practical work, as undertaken in the field and in the office, and occupies the whole of each day for about three weeks. The hours of instruction thus correspond to an ordinary Course extending over a much longer period. The Class will be next held in summer 1901.

Course of Study.

The following course is recommended for Students preparing for the Degree of B.Sc. in Engineering :—

1st Year. — Mathematics [Intermediate Honours Class (Winter), or Advanced Class (Summer)], Geometrical Drawing and Graphics, Chemistry (or Natural Philosophy), Engineering Field-Work (Summer Session).

2nd Year. — Engineering and Natural Philosophy (or Chemistry), Laboratory (Chemical or Physical), Engineering, Engineering and Mechanical Drawing.

3rd Year.—Natural Philosophy (Advanced Class), Engineering, Optional Course.

In some cases a modification of the above may be desirable.

The Engineering Field-Work Class may be taken during whichever of the Summers it is held.

VI. DYNAMICS.

C. G. KNOTT, D.Sc., *Lecturer.*

As a preparation for the Course described below, Students of Engineering are advised to take the Summer Half-Course on *Elementary Dynamics*, either before or after passing the First B.Sc. Examination in Natural Philosophy. For Synopsis, see Courses in Faculty of Arts.

The Advanced Science Course on Dynamics, of fifty Lectures, by the Lecturer on Applied Mathematics, is adapted for Engineering Students. In the treatment of the subject practical applications and, in particular, graphical methods of solution will receive attention; while the simpler processes only of the differential and integral calculus will be used. The Course will include the Kinematics, Kinetics, and Statics, of particles, rigid solids, flexible cords, and perfect fluids; and the more elementary parts of Strains and Elasticity.

Books recommended.—The simpler sections of Tait's "*Dynamics*"; Rankine's *Applied Mechanics.*

VII. GEOLOGY AND MINERALOGY.

PROFESSOR JAMES GEIKIE.

For Synopsis of Lectures, see Summer Course under Pure Science.

III.—PUBLIC HEALTH.

I. LABORATORY WORK.

PROFESSOR HUNTER STEWART.

(I.) PRELIMINARY WORK.

Exercises in weighing, each worker testing the accuracy of the graduation of his pipettes and burettes by weighing. Taking specific gravities of solids and liquids.

(II.) CHEMICAL AND PHYSICAL WORK.

AIR.—Temperature, Maximum and Minimum Thermometers—Pressure—Reading of Barometer, and correction for Elevation and Temperature—Moisture—Dew Point by Daniell's

Hygrometer and Wet and Dry Bulb Thermometers—Determination of Absolute and Relative Humidity—Quantitative Determination of Carbonic Acid and Ammonia.

SOIL.—Determination of Water Capacity—Porosity and Permeability of Sand and Loamy Soil—Determination of Ammonia and Organic Nitrogen in Soil, and of Carbonic Acid in Ground Air—Use of Earth Thermometers.

WATER.—Total Solid Residue and Quantitative Estimation of Lime, Magnesia, and Sulphuric Acid in a Water Residue—Chlorides—Hardness—Lead in Water (colorimetrically)—Organic Matter in terms of "Albuminoid Ammonia," Organic Carbon and Nitrogen, and as "Oxygen required"—Nitrates and Nitrites by conversion into Nitric Oxide and Measurement of the Gas—Nitrites by Gries' Method.

Gases in Water.—Determination of Total Volume of Gases and of the Nitrogen and Oxygen—Estimation of Oxygen by Manganous Chloride.

Sewage.—Composition of Sewage and of Effluents from Irrigation Works.

FOODS.—*Cereals, &c.*—Estimation of Albuminoids by Kjeldahl's Method, Fat by Extraction, Starch by conversion into Sugar.

Sugar.—(1) By Fehling's Solution volumetrically, and in Terms of Weight of Copper Oxide reduced (2) by Polarimeter.

Milk.—Estimation of Albumen, Fat, Sugar, and Salts by Ritthausen's Method, and by Hoppe-Seyler's Method—Specific Gravity and Reaction of Milk.

Butter and Butterine.—Moisture—Salt—Casein—Determination of Nature of the Fat in terms of Volatile and Fixed Acids.

Tea and Coffee.—Moisture, Extract, Ash.

Cocoa.—Moisture, Fat, Ash.

Wine, Beer, &c.—Extract, Alcohol, Sugar, and Acidity.

Lime Juice and Lime Juice Cordial.—Extract, Ash, Sugar, Acidity.

DISINFECTANTS.—Estimation of available Chlorine in

Bleaching Powder—Determination of Comparative Value of different Disinfectants by lethal action on Microbes.

VENTILATION.—Determination of the amount of moisture in an occupied room. Each worker reports at least once on the state of the air of a room, ventilated by extraction, in terms of the amount of Carbonic Acid present, and also of the amount of air renewal, measured by the Anemometer.

The foregoing work is done by each worker, and in each subject his results must satisfy the teacher before he can leave it. During this part of the Course, Laboratory Lectures are given twice a week, when the rationale of the methods and the interpretation of the results are discussed.

(III.) BACTERIOLOGICAL.

The subject of the Laboratory Lectures during this part of the Course consists of a consideration of:—

The Morphology and Classification of the Micro-organisms—Sterilization by Dry and Moist Heat—Disinfection—Methods of Cultivation—Methods of obtaining Pure Cultures in Solid and Liquid Media—Anærobic Micro-organisms, and the Methods for their Culture—Bacterial Products, Ptomaines and Antitoxins—Micro-organisms in Water, Air, and Soil—Removal of Micro-organisms from Water (1) on the large scale by Sand Filtration—Construction and working of Filter Beds—Theory of Sand Filtration—(2) On the small scale by Pasteur-Chamberland, Berkefeld, and other Filters—Micro-organisms in Milk—Sterilization of Milk on small and large scale—Pasteurization of Milk.

Practical work by each worker—Sterilizing all glass apparatus, *e.g.* tubes, dishes, pipettes, &c.

Preparation in all stages of the following Culture Media—Nutrient Broth, Jelly, and Agar Agar, Potato Gelatine, Worts Gelatine, Glycerine Agar, Potatoes in Roux's Tubes.

From a mixture of several Micro-organisms to get a pure Culture of *one*, by (1) method of dilution in liquid medium, and (2) by plate cultivation on a solid medium.

Cultivation, staining, and microscopical examination of :—

Mould Fungi.—Penicilium—Aspergillus—Mucor.

Yeast Fungi.—Yeast—Mycoderma Vini.

Fission Fungi.—The ordinary bacteria found in Air, Water, Soil, or Milk, *e.g.* Bacillus Subtilis, Mycoides, Megaterium, Proteus, Lactic Acid, Prodigiosus, Micrococcus Aurantiacus, Ureæ, &c. ; and also the following pathogenic forms—Tubercle, Diphtheria, Anthrax, Typhoid, Tetanus, Cholera, Plague, Coli Communis, and Enteritidis.

Cultivation of Micro-organisms in Air by Petri's Method, in Soil (from borings at different depths), and in Water. Daily for a week each worker bacteriologically examines the Edinburgh Water Supply. The filter beds are visited, and samples of the water both before and after filtration are bacteriologically examined.

II. PHYSICS.

PROFESSOR TAIT.

CARGILL G. KNOTT, D.Sc., *Lecturer.*

For Synopses, see under Faculties of Arts and Medicine.

III. GEOLOGY.

PROFESSOR GEIKIE.

For Synopses of Courses, see under Pure Science.

IV. PUBLIC HEALTH AND SANITARY SCIENCE.

PROFESSOR HUNTER STEWART.

1. Sanitary Law, specially the Public Health Act (Scotland), 1897—The English Acts—Notification of Infectious Diseases—Housing of the Working Classes—Factories—Cowsheds and Dairies—and Nuisance removal Acts, &c., Bye-laws.

2. Vital Statistics—Census, how determined—Death Rates crude, corrected and standard—Birth and Marriage Rates—Life Tables—Zymotic Death Rate—Age Rate, Case Mortality—Variations in Case Incidence and Case Mortality—Value of Vital Statistics in Public Health Work—Mortality as affected by Occupation—Sickness Rates, &c.

3. *Epidemiology*—Medicine in relation to Public Health—

Immunity—Prophylaxis—Vaccination—Geographical distribution and etiology of the infectious diseases—Diseases of Animals communicable to man—Food Poisoning, Botulismus—Climates as determined by prevalent winds, temperature, moisture, altitude, and soil—Tropical, Temperate, and Arctic Climates.

4. Practical Sanitation—Water Supplies—Infectious Diseases—Hospitals—Disinfection of clothing, dwellings, and discharges from sick—Slaughter-houses—Meat inspection—Ventilation—Sewage disposal—Hygiene of Schools—Disposal of the dead.

V. SANITARY ENGINEERING, BUILDING CONSTRUCTION, ETC.

PROFESSOR ARMSTRONG.

(1) Site, environment, and construction of Dwellings.

(2) Water supply and distribution.

(3) Collection, treatment and disposal of Sewage and other Refuse.

(4) Air Supply, Ventilation and Warming.

(5) General design, with structural and mechanical details, of Sanitary Works, Municipal and Domestic.

(6) Design and construction of Hospitals.

(7) Nature, strength, and fitness of structural materials employed in Sanitary Works.

VI. INSTRUCTION IN MENSURATION AND DRAWING.

W. HUME KERR, M.A., B.Sc., *Lecturer.*

The Course will include the following subjects:—Scales, their Construction and Uses—Estimation of Areas and Volumes—Elements of Plane and Solid Geometry, and their application to the making of Structural Drawings from Models and Figured Sketches—The use of the Slide Rule and other Calculating instruments.

VII. CLINICAL INSTRUCTION regarding Fevers and Infectious Diseases during three months in a recognised Hospital.

IV.—AGRICULTURE.

I*a*. MATHEMATICS.

PROFESSOR CHRYSTAL.

CHARLES TWEEDIE, M.A., B.Sc., *Lecturer.*

Senior Classes, as for M.A. Synopses, see Faculty of Arts.

1*b*. ZOOLOGY.

PROFESSOR EWART.

For Synopsis of Lectures, see under Faculty of Medicine.

1*c*. BOTANY.

PROFESSOR BALFOUR.

For Synopsis of Lectures, see under Faculty of Medicine.

II. NATURAL PHILOSOPHY.

PROFESSOR TAIT.

For Synopsis of Lectures, see under Faculty of Arts.

III. CHEMISTRY.

PROFESSOR CRUM BROWN.

For Synopsis of Lectures, see under Faculty of Medicine.

IV. AGRICULTURE AND RURAL ECONOMY.

PROFESSOR WALLACE.

1. *Definition of Agriculture.*—Aid given by the Allied Sciences.

2. *Surface Geology.*—Formation and Classification of Soils—their Physical and Chemical Properties. Importance of Organic Nitrogen. Fixation of free Nitrogen. Indications of good or bad Soils—Methods of Management and Improvement.

3. *Drainage and Cultivation.* — Practice — Advantages of Drainage Irrigation—Wet-Warping—Mixing or Top-Dressing—Claying Marling—Chalking Liming Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.

4. *Implements and Machines of the Farm.*—Importance of their proper Construction and careful Management.

5. *Steam Cultivation.*—Advantages and Disadvantages.

6. *Motive Powers Employed on the Farm.*—1st, Man; 2nd, Horse; 3rd, Mechanical Powers (Water, Wind, Steam) their Values and Advantages.

7. *Farm Servants.*—Labour and Wages—Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour.

8. *Importance of Rotations.*—Different Rotations and reasons why they are adopted—Systems of Farming.

9. *Our Farm Crops* (including Grain, Root, Forage, and Hay Crops).—Selection and Cultivation. Prevention of Diseases.

10. *Identification of Grasses and Valuable Pasture Plants.*—Their Characteristics and Habits—Detection of Adulterations of Seeds—Regulations to protect Farmers in buying Seeds.

11. *The Management of Permanent Pasture.*—Proper Methods of making new Pasture—its After-treatment.

12. *Weeds in Pastures* and Means of Destroying them.

13. *Silage and the System of Ensilage.*—Its Advantages, &c. —Its Suitability and Unsuitability according to Locality.

14. *Manures.*—Farm-yard Manure—Mixing, Storing, and Application—great advantage as a General Manure. Special Manures and so-called Artificials—Times and Methods of their Application. Utilization of Liquid Manure and Town Sewage.

15. *Buildings and Fences.*—Construction of Fences—General Arrangement of Farm-Buildings—best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c.—Covered Yards—Ventilation—Drainage.

16. *Live-Stock.*—Cattle, Pigs, Horses, Sheep, Poultry—Breeds of each, and suitability to Local Conditions—"Principles of Breeding." Feeding and Management—Mixtures of Food. Cost of Producing a Stone of Beef, Mutton, and Pork, showing Profit.

17. *Dairying in all its Branches*, including the suitability of surrounding Conditions—Classes of Dairy Stock, and their Management—Treatment of Milk, its Sale, its Manufacture into Cheese, Butter, &c.

18. *Feeding Stuffs.*—Suitability of Common Food Substances to different Classes of Farm Stock—Purchase and disposal of the same—their Manurial Residues.

Text-Books.—Wallace's "Farm Live Stock of Great Britain," M'Connell's "Note-Book of Agricultural Facts and Figures," Fream's "Elements of Agriculture," "Rothamsted Experiments," and "Soils and their Properties."

Students are invited to consult the Professor at the beginning of the Session as to their plan of work.

Periodical visits will be made to suitable Farms. A Medal may be given for the best report on these excursions.

V. AGRICULTURAL CHEMISTRY.

A. PEEBLES AITKEN, D.Sc., *Lecturer.*

The Course comprises Lectures, Demonstrations, and Laboratory work :—

1. *The Atmosphere.*—The relation of its constituents to plant life—rain, dew, fog, and hoar frost, their causes and effects.

2. *Soils.*—Origin and formation—physical and chemical processes included in the term "weathering"—inorganic and organic constituents of soils—essential elements of fertility—work of living organisms in the soil—decay and putrefaction of vegetable matter—formation of humus—nitrification—relation of soils to air and moisture—capillarity—absorption of salts by soils—lysimetry—circumstances affecting the composition of drainage water—amelioration of soils by physical and chemical means—classification, investigation, and analysis of soils.

3. *Plants.*—Mineral and organic constituents of plants—their transformations and translocations during the life of plants from germination to maturity—respiration, transpiration, and assimilation—plant nutrition, and the specific effects of nutritive substances upon the growth and development of plants—water culture and other methods of investigating plant nutrition—meteorological conditions affecting the health and vigour of plants—sources whence plants derive their nitrogenous constituents—symbiosis—analysis of vegetable substances.

4. *Manures.*—Their classification, composition, and characteristics—specific action and suitability for different soils, climates, and crops—economic use, and the principles regulating their application—methods of conducting manurial experiments—analysis and investigation of manures—valuation of manures, and of unexhausted fertility.

5. *Crops.*—Their composition and classification—fodder crops, their relative value as food—external conditions affecting their nutritive value, preservation, and digestibility—theory of rotations—crop residues and their relation to the fertility of the soil.

6. *Animal Nutrition.*—Chief constituents of the animal body—respiration—digestion—influence of diet on the growth and health of animals—laws of flesh and fat production, and relation of food to work—nutrient ratio as a guide to feeding—animal waste—relation of food to manure—external conditions affecting the health and growth of animals—preparation of fodder—analysis and investigation of feeding stuffs.

7. *Dairy Produce.*—Composition of milk—its physical characters—diseases and sophistications to which it is liable—characteristics of its ingredients—its analysis—butter and cheese—their composition, sophistication, and analysis—scientific aspects of dairy management.

VI. GEOLOGY.

PROFESSOR GEIKIE.

For Summer and Winter Courses, see under Pure Science.

VII. VETERINARY HYGIENE.

Lectures of recognised teachers of the subject.

VIII. AGRICULTURAL ENTOMOLOGY.

Course of twenty Lectures and Laboratory Demonstrations.

W. FREAM, LL.D., B.Sc., *Steven Lecturer.*

(*Free to Present and Past Students of the Agriculture Class.*)

Position of Insects in the Animal Kingdom.

Morphology and physiology of Insects, particularly in so far as such knowledge is useful in baffling attacks of insect pests. Structural modifications of the mouth, legs, and wings.

Life-history of Insects.

General principle that where the life history involves a series

or cycle of changes, the measures of suppression should be directed against the weakest link in the chain. Illustrations.

Methods of insect attack, and enormous losses consequent thereon. Incidentally:—(*a*) Stage in the life-history of the insect at which it becomes actively injurious. (*b*) Period in the growth of the crop when insect injury begins. (*c*) Organs of the plant which are attacked.

Methods of *prevention*, as distinguished from *remedy*.

General methods of prevention or remedy, as distinguished from *special*. The former are, in the main, agricultural. The latter usually involve the application of specific insecticides, or the subjection of the crop to treatment distinct from ordinary agricultural operations.

Insecticides: composition and properties of the more important. Methods of application.

Mechanical appliances for the distribution of insecticides.

Inter-relationship of economic entomology and systematic botany.

Natural enemies of insects; particularly (*a*) insectivorous mammals and birds, (*b*) other insects, (*c*) parasites.

Classification of insects, directed especially to the means of identifying injurious insects in their several stages.

Characters of the natural orders of insects illustrated by genera which furnish destructive species.

Special discussion of the natural orders Coleoptera, Hymenoptera, Lepidoptera, Hemiptera, and Diptera.

Convenient groupings of insects—(*a*) According to crop attacked; (*b*) According to mode of attack.

Detailed discussion of insects injurious to crops, to forest and fruit trees, and to live stock in Britain, with methods of prevention and remedy:—*inter alia*—Wireworms, weevils, turnip-flies, bark beetles, thrips, saw-flies, sirices, surface-caterpillars, winter moths, codlin-moths, goat-moths, leopard-moths, magpie-moths, cabbage butterflies, aphides, scale-insects, mangel-flies, cabbage-flies, onion-flies, Hessian flies, wheat-midges, gout-flies, frit-flies, celery-flies, leather-jackets, ox-warble-flies, sheep's-nostril-flies, gad-flies, forest-flies, sheep-louse flies, &c. Other pests,

outside the class Insecta: as millepedes, arachnids, eel-worms.

Present position of Agricultural Entomology in Britain, &c., and remarkable advances made during recent years. The course is profusely illustrated by carefully prepared natural specimens, the characters of which are demonstrated by the Lecturer. The instruction is further facilitated by a unique set of special coloured diagrams, from the pencil of Miss Ormerod.

IX. ECONOMIC SCIENCE AS APPLIED TO AGRICULTURE.

PROFESSOR NICHOLSON.

Lectures up to Christmas, see under Faculty of Arts.

X. (*a*) FORESTRY.

COLONEL BAILEY, *Lecturer.*

Five days a week, at 10 A.M., during Winter.

1. *Principles of Sylviculture.* On the general lines of Dr Schlich's "Manual of Forestry," vol. i.

2. *Formation and Tending of Woods.* On the general lines of Dr Schlich's "Manual of Forestry," vol. ii.

3. *Protection of Standing Woods.*—Draining; fencing; cold winds and storms; fires; mammals and birds; insects; diseases; weeds; frost and drought; rain, hail, snow and rime; wounds.

4. *Timber.*—Its structure, characteristics, and identification; relative form and size of stem, branches and roots; physical properties; seasoning; defects and unsoundness; durability.

5. *Utilisation of Produce.*—Uses of wood; felling; conversion; measurement and sale; transport; harvesting of bark; fodder, fruits, and litter: impregnation; charcoal.

6. *Working Plans.*—General principles.

7. *Uses and Effects of Forests.*—Direct uses; indirect effects—effects on temperature and moisture, mechanical effects.

8. *Forestry in Scotland.*—General considerations; the financial question.

X. (*b*) EXPERIMENTAL PHYSICS.

PROFESSOR TAIT.

Full Laboratory Course, see under Faculty of Arts.

X. (*c*) ENGINEERING.

PROFESSOR ARMSTRONG.

See Winter Course, under Graduation in Engineering.

XI. ENGINEERING FIELD WORK.

PROFESSOR ARMSTRONG.

See Summer Course, under Graduation Engineering.

Graduation in Science.

I.—PURE SCIENCE.

Regulations and Curricula for Degrees in Pure Science.

Candidates who began attendance on qualifying Science Classes before 1st October 1892, *are referred to the Calendar for* 1895-96 *or previous Calendars.*

N.B.—Figures within brackets refer to the Sections of Ordinance No. 12.

[1.] Two Degrees in Science are conferred by the University of Edinburgh, viz.:—Bachelor of Science (B.Sc.) and Doctor of Science (D.Sc.). These degrees are given in Pure Science and in Applied Science.

I.—Preliminary Examination.

The Preliminary Examinations in General Education are held in the Examination Hall in the University, in autumn and spring. (Time-Table, pages 121-124.)

Candidates may obtain Schedules at the Matriculation Office on and after 8th September 1899 and on and after 15th February 1900. The Schedules must be completed and lodged along with the Fees not later than 19th September 1899 and 1st March 1900 for the Autumn and Spring Examinations respectively.

Fee, 10s. 6d. for each appearance.

Candidates may pay the Fees personally, or transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts* crossed Union Bank of Scotland (Hunter Square Branch),

Edinburgh, but not by cheques on private accounts. When names are not entered and Fees paid, or a Pass to the Examination obtained where the fee has been previously paid, on or before the stated dates, an additional or late entry fee of 10s. must be paid before the Candidate can be admitted to Examination. This fee will not be received after twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his Name and pay the Fee, or, when the Fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear.

[II.] 1. Candidates before entering on the Curriculum must, unless exempted, pass a Preliminary Examination in the following subjects:[1]—

(1) English.
(2) One of the following:—Latin, Greek, French, or German.
(3) Mathematics.
(4) One of the following:—Latin, Greek, French, or German (if not already taken), Italian, or such other language as the Senatus may approve,[2] Dynamics.

2. *English* includes Grammar and Composition, and the Outlines of Geography and British History, the standard being that presently adopted for the Higher Grade Leaving Certificate of the Scottish Education Department.

3. *Latin* and *Greek* comprise grammatical questions, translations into English from Latin or Greek authors, not previously prescribed, and translations of plain passages or easy sentences from English into Latin or Greek. The standard is that presently adopted for the Lower Grade Leaving Certificate.

4. *French*, *German*, and *Italian* comprise grammatical, literary, and easy philological questions, translation into English from French, German, or Italian authors, not previously prescribed, and translations from English into French, German, or Italian. The standard is that presently adopted for the Higher Grade Leaving Certificate of the Scottish Education Department.

5. *Mathematics*—A student, who, having passed the Arts Preliminary Examination, has thereafter obtained a certificate of attendance on a qualifying class of Mathematics, will not be required to pass any further examination in Mathematics as a condition of entering on the course of study for graduation in Science.

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[1] See section 5, and also additional Regulations of Joint Board of Examiners, pages 429-434.

[2] Any Candidate who proposes to be examined in a language other than those above named, is required to apply to the Senatus for approval before 1st February or 1st July for the Spring and Autumn Examinations respectively.

6. Candidates may take Mathematics on the intermediate standard instead of on the higher standard,[1] provided they also take an additional modern language on the standard of the Preliminary Examination for Degrees in Medicine, as a fifth subject.

Mathematics on the intermediate standard comprises Mathematics on the lower standard—viz., (1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest; (2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations; (3) Geometry—Euclid, Books I., II., and III. (or their equivalents), with easy deductions; and also (*a*) Euclid; Book VI., Propositions 1-19, or Geometry equivalent thereto. (*b*) Algebra; Quadratic Equations, Ratio and Proportion. (*c*) The Trigonometry of Right-angled Triangles.

No Candidate will be entitled to profess Mathematics, Natural Philosophy, or Astronomy at the Final Science Examination, unless he has passed the Preliminary Examination in Mathematics on the higher standard.

Mathematics on the higher standard comprises Mathematics on the lower standard as above, and Books IV., VI., and the first twenty-one propositions of Book XI. (or their equivalents), with deductions, Quadratic Equations, Trigonometry to the solution of Triangles inclusive, and the use of Logarithmic Tables.

7. *Dynamics* includes Elementary Statics and Kinetics of Solids, Liquids, and Gases.

8. A Candidate must pass in all the required subjects at one or not more than two Examinations, provided that he may offer himself for re-examination, as often as may be necessary, to satisfy this condition.

9. Attendance on any Science Class will not qualify for Graduation in Pure Science unless the whole Preliminary Examination has been previously passed.

II.—Degree of B.Sc. in Pure Science.

[III.[2]] 1. Candidates for the Degree of B.Sc. must, in the course of not less than three Academical years (*i.e.* three Winter Sessions, or two Winter Sessions, and three Summer Sessions), attend at least seven courses of instruction in the subjects included in the Science Examination which they purpose to undergo.

2. Three of these Courses must be in subjects prescribed for the First Science Examination, and four must be in subjects prescribed for the Final Science Examination.

[IV.] 3. Four of the seven Courses must be taken in the University of Edinburgh. The remaining three Courses may be taken at this University or at other Universities or Institutions approved by

[1] This does not apply to graduation in Engineering.

[2] Figures within brackets refer to the Sections of Ordinance No. 12.

the University Court, or under teachers recognised by the University Court for purposes of Graduation in Science,[2] provided that the fees for attendance at an approved Institution or under a recognised teacher in Edinburgh, shall in all cases not be less than the fees exigible for the corresponding Courses in the University of Edinburgh.[1 2]

[V.] 4. Every Candidate for a Degree in Science must produce his Matriculation Ticket for the year in which he appears for Examination or Graduation.

5. All Candidates, not Matriculated Students of this University, availing themselves of the permission to attend Lectures at approved Institutions or by recognised teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names at the Matriculation office, paying a fee of the same amount as the Matriculation Fee, and having, in respect of such payment, a right to the use of the University Library.

[XVII.] 6. A Student who before October 1892 has completed a part of his course of study with a view to Graduation in Science under regulations in force at the time in this University, and shall thereafter complete his course of study and pass the necessary Examinations in conformity with such regulations, or with those now in force, may become a Candidate for the Degree of B.Sc.

7. Candidates for Graduation who have previously passed the Examinations are required to intimate to the Clerk to the Senatus their intention to graduate, and pay the Registration fee at least ten days before the date of Graduation. Those whose Examinations are not then completed are required to give such intimation at the earliest possible date, and at latest one clear day before the day of Graduation.

Universities and Institutions at present recognised in Terms of Regulation II. 3.[1 2]

The Universities of St Andrews, Glasgow, Aberdeen, Oxford, Cambridge, Dublin, and Victoria University, Manchester. Heriot-Watt College:—Mechanics and Physics, as equivalent to one course in Natural Philosophy, qualifying for the first B.Sc. examination in Pure Science, Engineering, and Agriculture; Advanced Chemistry and Chemical Laboratory, as qualifying for the final B.Sc. examination; Electricity (Pure and Applied), Engineering, Laboratory Practice (Mechanical or Electrical), as qualifying for the degree of

[1] Only Institutions and Teachers with the necessary staff and appliances for Theoretical and Practical Instruction in Science will be recognised by the University. A List of Universities and Institutions at present recognised in terms of this regulation is given on this and the following page.

[2] Extra-Academical courses, which have been recognised as qualifying for graduation in Medicine prior to November 1892, are also recognised for graduation in Science, provided they are equivalent to the Science Courses in the same subjects in the University.

B.Sc. in Engineering. The Glasgow and West of Scotland Technical College; University College, Dundee; University College, London; King's College, London; The Royal Colleges of Science, South Kensington; The Owens College, Manchester; The Mason College, Birmingham; The College of Science, Newcastle-on-Tyne; The Yorkshire College of Science, Leeds; University College, Bristol; University College, Liverpool; The Firth College, Sheffield; University College, Nottingham; The University College of North Wales, Bangor; University College of Wales, Aberystwyth; The University College of South Wales and Monmouthshire; The Engineering College, Cooper's Hill. The Queen's College, Belfast; The Queen's College, Cork; The Queen's College, Galway; The College of Science, Stephen's Green, Dublin; The School of Mines, Dublin; The Royal Agricultural College, Cirencester; The College of Agriculture, Downton; and the Veterinary Colleges of the United Kingdom; The Presidency Colleges in Calcutta, Madras, and Bombay; The Thomasson Engineering College, and the Engineering College, Poona; M'Gill University, Montreal; The University College of Toronto; Queen's University, Kingston, Ontario; The University of Sydney; The University of Melbourne; The University of Adelaide; Wellington College; The University of New Zealand; The University of Otago; Dalhousie College, Halifax, Nova Scotia; Stellenbosch College, South Africa; The University of Harvard; The University of Yale; The Johns Hopkins University; The Universities, and Polytechnic Schools supported and regulated or recognised by the governments of the respective Countries of Europe.

EXAMINATIONS.

Degree of Bachelor of Science.

For the Degree of B.Sc. there are two Examinations, conducted by written questions, as well as orally and practically.

(*a*) *First Science Examination.*

[VIII.] 1. The First Examination for the Degree of B.Sc. is as to the general knowledge of the Candidate on the following subjects:—

(i.) Mathematics, or Biology (*i.e.* Zoology and Botany).
(ii.) Natural Philosophy.
(iii.) Chemistry.

2. The Examination in these subjects is the same as for the ordinary degree of Master of Arts. [The First Professional Examination (Medicine) in Zoology and Botany is not accepted as equivalent.]

3. Candidates may present themselves in any one or more of these subjects at any Examination held after they have attended a full course in the subject or subjects professed.

(*b*) *Second Science Examination.*

[IX.] 1. The Second B.Sc. Examination is on a higher standard in any three or more of the following subjects:—

(1) Mathematics.

(2) Natural Philosophy.
(3) Astronomy.
(4) Chemistry.
(5) Human Anatomy, including Anthropology.
(6) Physiology, including Histology and Physiological Chemistry.
(7) Geology, including Mineralogy.
(8) Zoology, including Comparative Anatomy.
(9) Botany, including Vegetable Physiology.

2. The standard of this Examination is as nearly as possible equivalent to that of the Examination for the Degree of M.A. with Honours, where the subjects are different: and where the subjects are the same the examination is identical.

3. A subject already taken for the First Examination may be taken also for the Second Examination.

4. Candidates presenting themselves for the Second Examination must have attended four full courses of higher instruction, including practical or laboratory work, in the Subjects professed. [See below.]

5. The Second Science Examination cannot be taken sooner than one year after the Candidate has passed the First Science Examination.

[x.] 6. If a student, before passing the Preliminary Examination has attended a class qualifying for graduation, the Senatus may, on special cause shown, permit him to count such class for examination, on condition of his passing the full Preliminary Examination within such time as the Senatus may appoint.

[xi.] 7. A Candidate for the degree of B.Sc. is not deemed to have attended a class as part of the curriculum for that degree unless he presents a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

[xii.] 8. The Examiners for the degree of B.Sc. have power to report that a Candidate has passed with special distinction in one or more of the subjects professed by him: and in such case a Diploma is given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

9. A Candidate who has passed the First and Second Science Examinations, and otherwise complied with the regulations for Graduation, will be recommended to the Senatus for the Degree of B.Sc.

Courses for Final Examination in Pure Science.[1]

In Mathematics and Natural Philosophy the Examination is the same as for Honours in Arts. In each of the other subjects professed, two written papers are set, namely, a *first* and a *second* paper; and the Practical and Oral Examinations also consist of *first* and *second* parts. The second part of the Examination is of a higher standard than the first. Candidates must pass the first section of the Examination (as well written as practical and oral) in all the subjects professed. They must also pass the second section in at least one of their subjects. The

[1] See footnote 2, page 230.

following Courses of Higher Instruction in this University, (1) Intermediate and (2) Advanced, qualify for the first and second stages of the Final Examination in Pure Science :—

1. Mathematics : (1) *Intermediate Course*, as for Honours in Arts. (2) *Advanced Course*, as for Honours in Arts.

2. Natural Philosophy : (1) *Intermediate* Mathematical, (2) *Advanced* Mathematical, *Advanced* Experimental, or *Special* Laboratory Course.

3. Astronomy : (1) *Intermediate Course :* Winter Lecture Course, including Practical work, (2) *Advanced Course* of Practical Instruction at the Observatory.

4. Chemistry : (1) *Intermediate Course :* One Winter Course, or two Summer Courses in the Laboratory, and a Lecture Course on Organic Chemistry. (2) *Advanced Course :* Further Laboratory Work and one additional Lecture Course.

5. Human Anatomy, including Anthropology : (1) *Intermediate Course :* Six months' Lectures on Systematic Anatomy (Winter Session), with six months' Practical Anatomy. (2) *Advanced Course :* Course of Anthropology.

6. Physiology : (1) *Intermediate Course :* Six months' Lecture Course (Winter Session) and Practical Work (Winter or Summer Session). (2) *Advanced Course :* Laboratory Work (Winter Session).

7. Geology, including Mineralogy : (1) *Intermediate Course :* Winter Lecture Course and Practical Class. (2) *Advanced Course :* Laboratory Work, or Advanced Lecture Course—either Petrology or Mineralogy and Crystallography.

8. Zoology, including Comparative Anatomy : (1) *Intermediate Course :* Six months' Course, including Lectures on Invertebrate Zoology, and on Embryology, with Laboratory Work. (2) *Advanced Course :* Six months' Course on the Morphology of the Invertebrata and Vertebrata, and Laboratory Work.

9. Botany, including Vegetable Physiology : (1) *Intermediate Course : One Winter and One Summer Course* in Laboratory. (2) *Advanced Course :* Laboratory Work, with one or more Lecture Courses.

Degree of Doctor of Science.

1. Graduates of this University who have held the Degree of B.Sc. for five years may offer themselves for the Degree of D.Sc. Candidates must profess one of the following branches of Science :—Mathematics ; Natural Philosophy ; Astronomy ; Chemistry ; Human Anatomy, including Anthropology ; Physiology, including Histology ; Geology, including Mineralogy ; Zoology, including Comparative Anatomy ; Botany, including Vegetable Physiology ; and in this they will be expected to show a thorough knowledge.

2. Masters of Arts of this University with first or second class honours in Mathematics and Natural Philosophy under the conditions prescribed by the present Regulations for Degrees in Arts, or under the Regulations previously in force in this University, may offer themselves for

the degree of D.Sc. after the expiry of five years from the date of their graduation in Arts, under the same conditions as if they held the degree of B.Sc.

3. Research Students within the meaning of the Regulations for the Encouragement of Special Study and Research and for the appointment of Research Fellows, may offer themselves for the degree of D.Sc. of the University in which they have prosecuted some special study or research, although they have not taken the degree of B.Sc. or the degree of M.A. with honours as aforesaid, in that University; provided—

(1) That they hold the degree of Bachelor of Science or Bachelor of Medicine of a Scottish or any recognised University, or a degree of any such University, which the Senatus shall hold equivalent to the degree of B.Sc. or to the degree of M.A. with first or second class honours in Mathematics and Natural Philosophy; provided that Candidates who hold any such degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students with a view to the degree of D.Sc., to pass an examination equivalent to an Honours or to a Final Science examination in a group of subjects cognate to their line of work as Research Students.

(2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and that they produce evidence of satisfactory progress in the special study or research undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

4. All Candidates for the degree of D.Sc. shall present a Thesis or a published Memoir or Work, to be approved by the Senatus on the recommendation of the Faculty of Science; provided that, if required by the Senatus, the Candidate shall also be bound to pass such an examination conducted orally or practically, or by written papers, or by all of these methods, on the subjects of his special study or of his Thesis, as may from time to time be determined. The Thesis shall be a record of original research undertaken by the Candidate, and shall be accompanied by a Declaration, signed by him, that the work has been done and the Thesis composed by himself.

The Thesis must be lodged with the *Dean of the Faculty of Science* and the fees paid on or before 1st December.

5. Notwithstanding and in supplement of the Regulations as to Examinations, the Senatus Academicus shall appoint such Professors or Lecturers as it may think suitable to conduct the examination of candidates who may offer themselves for the degree of D.Sc., and the University Court shall, after consultation with the Senatus Academicus, appoint an additional Examiner to act along with them. Such addi-

tional Examiner shall be a person of recognised eminence in the subject of the thesis, or memoir, or work which is to be submitted for approval. The result of the examination shall be reported to the appropriate Faculty or Committee of Senatus.

6. The degree of D.Sc. shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

7. The fee for examination for D.Sc. is £10, 10s.; for re-examination, £5, 5s.

Regulations for Special Study and Research and for Appointment of Research Fellows.

I. The Senatus, with the approval of the University Court, may make regulations under which graduates of Scottish Universities, or of other Universities recognised by the University Court, or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research, may be admitted to prosecute such study or research in the University.

II. It is the duty of the Senatus in each University—

(1) To receive and decide upon all applications for admission to prosecute special study or research.

(2) To prepare a list of all persons admitted as Research Students.

(3) To make regulations for the supervision of their work.

(4) To satisfy themselves from time to time that the Research Students are carrying on their work in a satisfactory manner.

(5) To suspend or exclude from any course any student whose conduct or progress is unsatisfactory.

III. Every applicant must send in to the Senatus a written application stating any degree or other distinction he has obtained, the line of study or research he wishes to prosecute and the probable period of its duration, together with evidence as to his character, capacity, and general qualifications.

IV. Any application shall be in the first instance referred by the Senatus to the appropriate Faculty, or to a Committee appointed by the Senatus; one member of the Committee shall always be a Professor or Lecturer within whose department the proposed line of study or research falls. No applicant shall be recommended by the Faculty or the Committee who has not satisfied them by examination or otherwise that he is qualified to prosecute the proposed line of study or research, and further—

(*a*) That his proposed line of study or research is fit and proper;

(*b*) That he possesses a good general education;

(*c*) That he is of good character;

(*d*) That he proposes to prosecute his studies or research during a period to be approved by the Senatus.

The Faculty or the Committee shall report to the Senatus on each application. It shall also be their duty, subject to the regulations of

the Senatus, to provide for the supervision of the Research Student's work, and to report at least once a year to the Senatus as to his progress and conduct. The Senatus shall then determine whether he shall remain a Research Student.

V. Every Research Student shall be required to matriculate each year, paying the ordinary fee.

VI. Research Students have the use of the University Laboratories and Museums, under such conditions as the University Court, after consultation with the Senatus, may determine.

VII. The title of Research Fellow may be conferred by the Senatus with the approval of the University Court, on Research Students who have shown special distinction. Such title shall not of itself confer any right to stipend, but it shall be in the power of the University Court to provide a stipend of such amount and for such period as it may think fit to any Research Fellow.

VIII. (1) The Research Fellows shall be appointed after consideration of the report or reports submitted in terms of Section IV.

(2) The title of Research Fellow may be conferred at the commencement of the Research Student's course of study or research, or at any time during its progress, as the Senatus may determine.

(3) Research Fellows shall retain their title and stipend, if any, for the period during which they are engaged in special study or research in the University, and no longer.

(4) Research Students who have been appointed Research Fellows shall continue subject to the above conditions as to the supervision of their work and the reports to be made thereon.

IX. Nothing herein contained shall prejudice the right of Research Students to such Fellowships, Scholarships, or Prizes as may be open to them by Ordinance or Deed of Foundation.

X. The University Court may provide such sums as it may think fit in aid of the expenses of Special Study or Research.

Regulations for the Graduation of Women and for their Instruction.

excerpts from ordinance no. 18 (general no. 9).

1. It shall be in the power of the University Court to admit women to graduation.

2. The conditions for graduation shall be the same for women as for men, subject to the following modifications, which shall have effect until provision is made for the instruction of women in all subjects qualifying for graduation, in which provision is made for the instruction of men :—

Section 3 of the Regulations for Degrees in Science shall not be applicable to the graduation of women in Science, so long as within the Faculty provision is not made for the instruction of women in any

subject qualifying for graduation in which provision is made for the instruction of men, and it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of Graduation in Science: Provided always that every candidate for graduation shall produce evidence of having satisfied the conditions with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University.

3. So soon as within the University provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men, the conditions for the graduation of women shall be the same as the conditions for the graduation of men.

4. (1) Women who attend classes in the University must matriculate, paying a fee of the same amount as that exigible for other students. (2) Women, who are candidates for graduation but not matriculated students, and who may attend classes in Edinburgh, under the provisions above set forth, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by students of the University; and having, in respect of such payment, a right to the use of the Library of the University.

Additional Regulations by the University Court.

Any woman who has received the requisite instruction in Chemistry, Botany, and Zoology, in any other University or Institution already approved by the University with the view to the Graduation of men, or under any teacher already recognised with that view, or in the Medical College for Women, Chambers Street, Edinburgh, will—subject to the provisions of Ordinance[1] No. 18, General No. 9, Regulations for the Graduation of Women, &c.—be admitted to Examination in these subjects for Graduation in Science.

Women may attend within the University the advanced Courses in Botany and Zoology, and the advanced Lecture Courses in the Chemistry Department, qualifying for Graduation in Science.

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[1] See Ordinance, Appendix to Calendar, 1892-93, page 51.

OUTLINE OF EXAMINATIONS.

I.—First Examination for B.Sc. in Pure Science.

(*a*1) MATHEMATICS.

Arithmetic—Euclid, Books I., II., III., IV., VI., and XI., or their equivalent, with their application to Mensuration—Algebra, Trigonometry, Conic Sections, Geometrical and Analytical.

Candidates must show sufficient knowledge in each of the subjects of Examination.

(*a*2) ZOOLOGY.

(*a*) The General Principles of Biology.

(*b*) The distinctive characters of the Invertebrate groups, and the structure, habits, &c., of Amœba, Paramœcium, Hydra, Arenicola, Hirudo, Anodon, Helix, Nephrops, and Periplaneta.

(*c*) The distinctive characters of the Chordata groups, and the structure, habits, &c., of Myxine, Raia, Rana, Columba, Ornithorhynchus, Macropus, Lepus, Ovis, and Canis.

(*d*) The skeletons of Crocodilus, Equus, Felis (skull only), Balæna, Vespertilio, and Troglodytes.

(*e*) A general knowledge of the Orders of Mammalia.

(*f*) The life-histories of Gregarina, Distoma, Tænia, Ascaris, Trichina, and Filaria.

(*g*) The outlines of the development of Amphioxus, Scyllium, and Rana, and of the fœtal appendages of Gallus and Lepus.

(*h*) The principles of the Geographical Distribution of Animals, and the Distribution of the Mammalia.

In addition to the above subjects, Candidates will require to possess a general knowledge of Wallace's "Darwinism."

(*a*2) BOTANY.

The characteristic features of the following groups and classes of the vegetable kingdoms:—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts and principles of Morphology (including Anatomy, Histology, and Development) and Physiology. The life-history of the following plants:—Bacterium, Nostoc, Spirogyra, Saccharomyces, Mucor, Vaucheria, Agaricus, Collema, Puccinia, Claviceps, Eurotium, Marchantia, Fucus, Polysiphonia, Funaria, Aspidium, Equisetum, Selaginella, Pinus, Cycas, Scilla, Capsella, Helianthus, Ulmus, Quercus.

The characters of plants belonging to the chief British natural orders of Phanerogamæ.

(*b*) NATURAL PHILOSOPHY.

Elementary Dynamics.
Experimental Physics.
Candidates must show sufficient knowledge of both subjects.

(*c*) CHEMISTRY.

Chemical changes as distinguished from physical changes. Elements; compounds; mixtures. Laws of chemical combination by weight and by volume. The Atomic theory. Atoms; molecules. Avogadro's Hypothesis. Molecular weights of gaseous and volatile substances. Atomic weights. Law of Dulong and Petit. Chemical Notation—Symbols; formulæ; equations. Simple chemical calculations.

The non-metallic elements and their chief compounds; especially the compounds of oxygen, of hydrogen, and of chlorine with the other non-metals. The more important inorganic acids. The atmosphere. Combustion. Oxidation and reduction.

The following metallic elements and their chief compounds; especially those with oxygen, with chlorine, and with sulphur: Gold, platinum, silver, mercury, lead, antimony, tin, copper, bismuth, zinc, iron, aluminium, chromium, manganese, barium, strontium, calcium, magnesium, potassium, sodium.

The following salts: the ammonium salts; the more important sulphates, sulphites, thiosulphates, nitrates, nitrites, carbonates, bromides, iodides, iodates, phosphates, borates, silicates.

The relations of bases, acids, and salts. Electrolysis. Quantivalence. The periodic law.

The metallurgy of silver, mercury, copper, lead, tin, zinc, iron (including cast iron and steel). Alloys, such as brass, bronze, solder, type-metal. Amalgams.

The manufacture of aluminium, magnesium, potassium, sodium, glass, porcelain, mortar, gunpowder, sulphuric acid, sodium carbonate and bicarbonate, caustic soda, bleaching powder and chlorates, white lead.

Classification of Carbon compounds. Marsh Gas and its Homologues. Chloroform. Methyl and Ethyl Alcohols and Ethers. Substituted ammonias and ammonium salts. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Acetylene, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Distillation of Wood and of Coal. Benzene, Benzoic Acid, Phenol, Salicylic Acid, Oil of Bitter Almonds, Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea, Uric Acid.

Simple Qualitative Analysis. The examination in this is conducted practically. Candidates are required to examine unknown *single salts* for both metallic and salt radicals, as contained in the following lists:—

Silver, Mercurous, Mercuric, Cupric, Lead, Stannous, Stannic, Bismuth, Antimony (*Tartar Emetic* may be given), Arsenious, Zinc, Manganous, Ferrous, Ferric, Chromic, Aluminium, Calcium, Barium, Strontium, Magnesium, Ammonium, Sodium, Potassium.

Carbonate, Sulphite, Thiosulphate, Sulphide, Hypochlorite (Bleaching solution), Nitrite, Chloride, Bromide, Iodide, Cyanide, Sulphate, Chromate, Orthophosphate, Arseniate, Arsenite, Borate, Oxalate, Nitrate, Chlorate, Acetate.

At the examination, Candidates are supplied with the following reagents, &c. :—Acetic Acid, dilute Hydrochloric Acid, dilute Nitric Acid, Sulphuric Acid, dilute Sulphuric Acid, Alcohol, Iodine, Ammonia, Ammonium Carbonate, Ammonium Chloride, Ammonium Oxalate, Ammonium Sulphide, Barium Nitrate, Bleaching Powder, Calcium Chloride, Calcium Hydrate, Calcium Sulphate, Cobaltous Nitrate, Cupric Sulphate, Ferric Chloride, Ferrous Sulphate, Lead Acetate, Magnesium Sulphate, Mercuric Chloride, Potassium Carbonate, Potassium Chromate, Potassium Ferricyanide, Potassium Ferrocyanide, Potassium Hydrate, Potassium Iodide, Silver Nitrate, Sodium Bitartrate, Sodium Phosphate, Sodium Sulphite, Stannous Chloride, Sulphuretted Hydrogen. *Solids*—Manganese Dioxide, Sodium Carbonate, Borax, Sulphur, Zinc, Copper.

Test papers :—Blue Litmus, Red Litmus, Plain, Starch, Turmeric.

Bunsen Burner, Test Tubes.

II.—Final Examination.

(*a*) MATHEMATICS.

Pure Geometry, Algebra, Theory of Equations, including Determinants, Trigonometry (Plane and Spherical), Analytical Geometry, Differential and Integral Calculus, Calculus of Finite Differences. (The Candidate may, if he please, profess the Elements of Quaternion Analysis.)

(*b*) NATURAL PHILOSOPHY.

Experimental Physics; Analytical Dynamics and Thermodynamics; *imperative*.

In addition, two or more branches of Elementary Mathematical Physics (such as Geometrical or Physical Optics, Statical or Voltaic Electricity, Capillarity, &c.). These may be selected by the Candidate.

(*c*) ASTRONOMY.

1. The Principles and Practice of astronomically finding the geographical co-ordinates of the place of observation on land and at sea.

2. The Principles that guide the actual determination of the chief astronomical constants—*refraction*, *aberration*, *nutation*, *precession*, and *solar-parallax* in fixed observatories.

3. The methods used for determining the figure and size of the earth.

The Candidate will be required to explain the general principles on which the orbits of planets, etc., are calculated, and must show a thorough knowledge of the methods followed in the case either of a *comet*, *planet*, *double-star*, or of a *meteorite* and a *meteoric swarm*.

One group of observations must have been made in the field, or at an observatory, and fully reduced so as to show the value of the derived results, and the precautions that have been taken to free them from instrumental and personal errors. Candidates will also be examined as to the best ways of testing the critical parts of instruments, such as a *pivot*, *screw*, *level*, &c.

(*d*) CHEMISTRY.

Written and Oral Examinations:—Inorganic, including Mineralogical, Chemistry; Organic Chemistry; Chemical Crystallography; History of Chemistry.

In the written papers a choice of questions is allowed, so as to adapt the examination to the various courses of advanced study which Candidates may have selected.

Practical Examination:—Intermediate complex qualitative Analysis; Inorganic preparations; Gravimetric and Volumetric Analysis.

Each Candidate taking the higher standard will be further examined on Organic Preparations and on any two of the following subjects, selected by himself:—Ultimate Organic Analysis; Gas Analysis; Assaying; Physico-chemical measurements.

(*e*) HUMAN ANATOMY, INCLUDING ANTHROPOLOGY.

Candidates are required to show a competent knowledge of the development of the human body and of its parts and organs; also the position and general arrangement of the different "systems" of organs which enter into its construction, and the structure both of these organs and of the simple tissues. A special knowledge of the locomotory apparatus and of the nervous and vascular systems will be required. An acquaintance with the technical applications of human anatomy to the practice of Medicine and Surgery is not asked for.

The Anthropological part of the subject will embrace a knowledge of race characters as found in the skull and other parts of the skeleton, in the skin, eyes, hair, features, and the external configuration of the body generally. The methods of anthropometrical measurement both of the living body and of the skeleton should be known. The possible influence of use and of external surroundings in producing modifications in the physical characters of man will require attention. An acquaintance with the "types" of mankind and the structural relations of man to the higher mammals will also be expected.

(*f*) ANIMAL PHYSIOLOGY.

The Structure, Chemical Composition, and Functions of the Elementary Tissues of Man and Animals.

The Minute Structure and Functions of the Organs concerned in the Nutrition of Man and Mammals.

The Chemical Composition and Functions of the Foods and Fluids involved in the Process of Nutrition.

The Temperature of Man and Animals.

Human Voice and Speech.

The Minute Structure and Functions of the Organs of Sense, Brain, Spinal Cord, and chief Nerves of Man and other Vertebrates.

In the Oral Examination Candidates will be examined on the above subjects, and will also be required to show their practical acquaintance with Histology, Physiological Chemistry, and Experimental Physiology.

(*g*) GEOLOGY, INCLUDING MINERALOGY.

1. *Dynamical Geology.*—The nature and operation of geological agents:—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

2. *Mineralogy.*—Physical and Chemical characters of the more important and typical species in the various mineral groups—more especially the rock-forming minerals and ores.

3. *Petrology.*—Megascopic and Microscopic Characters, Composition, Origin and Distribution of Rocks.

4. *Structural Geology.*—Structure of Rock-masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

5. *Palæontological Geology.*—Characters, and distribution in time, of the more important Genera and Orders, especially those found fossil in Britain.

6. *Stratigraphical Geology.*—The History of the Geological Systems—more especially those of the British Islands.

7. *Physiographical Geology.*—Origin of the present outlines of the Earth's surface.

(*h*) ZOOLOGY, INCLUDING COMPARATIVE ANATOMY.

1. The Systematic Zoology of the Invertebrate and Vertebrate groups.

2. The Elements of the Comparative Anatomy and Development of the Invertebrata and Vertebrata.

3. The Principles of Natural Selection, a Knowledge of the Geographical Distribution of Vertebrate Animals.

The following books are recommended:—Haswell and Parker's "Zoology"; Lang's "Text-Book of Comparative Anatomy"; Huxley's "Vertebrata"; Flower and Lyddeker's "Mammalia"; Vogt and Yung's "Practical Zootomy" (German or French edition); Darwin's "Origin of Species"; Wallace's "Darwinism" and "Island Life"; Marshall's "Embryology."

(*f*) BOTANY, INCLUDING VEGETABLE PHYSIOLOGY.

1. Morphology (including Anatomy), and Physiology of Plants.
2. The Principles of Plant Classification, and the Systematic Characters of the chief Families of Plants, including the Life Histories of Representative Types.
3. The chief facts of Geographical Distribution, and the explanation of these.
4. The chief facts of Vegetable Palæontology, and their bearing on the Theory of Descent.

II.—ENGINEERING.

REGULATIONS AND CURRICULUM FOR DEGREES IN ENGINEERING.

Candidates who began attendance on qualifying Science Classes before 1st October 1893, *are referred to* CALENDAR 1895-96 *or previous* CALENDARS.

I. Two degrees in Science in Engineering are conferred by the University of Edinburgh—viz., Bachelor of Science in Engineering and Doctor of Science in Engineering.

I.—PRELIMINARY EXAMINATION FOR BACHELOR OF SCIENCE.

II. Every candidate for the degree of B.Sc. in Engineering must pass the Preliminary Examination[1] prescribed for Degrees in Pure Science, and the conditions with respect thereto imposed by the Regulations for Degrees in Pure Science are applicable in all respects to Degrees in Engineering except as follows—viz., Mathematics must be passed on the Higher Standard and the Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.

II.—COURSES OF INSTRUCTION.

III. (1) Candidates must, in the course of not less than three Academical years (*i.e.* three Winter Sessions, or two Winter Sessions and three Summer Sessions), attend at least the eleven courses of instruction prescribed under Section VIII. hereof.

(2) It is the duty of the Senatus to determine from time to time which of the said courses are full and which are half courses respectively, and also to determine the number of meetings of which such full courses and half courses respectively shall consist, and to report its determination to the University Court for its approval.

IV. (1) Five full courses or their equivalent (counting two half

[1] See page 228.

courses as one full course) must be taken in the University of Edinburgh, and must include the necessary courses in Engineering, except where the University Court, after consultation with the Senatus, sees fit to allow one of the courses in Engineering to be taken outside the University under the provisions of the next sub-section.

(2) The remainder of the said courses may be taken in other Universities or Institutions approved by the University Court, or under teachers recognised by the University Court for purposes of graduation in Science in Engineering :[1] Provided that the fees for attendance at an approved Institution in Edinburgh or under a recognised teacher there are not less than the fees exigible for the corresponding courses in the University of Edinburgh.

V. The University Court may make regulations to enable candidates, not matriculated students of the University of Edinburgh, availing themselves of the permission to attend lectures at approved institutions or by recognised teachers in Edinburgh to obtain, on payment of a fee not exceeding in amount the matriculation fee paid by the students of the University, a right to the use of the Library of the University.

VI. (1) It is the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Senatus a scheme specifying what proportion of the courses shall be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus transmits such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(2) It is the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science, for its consideration, syllabuses of the subjects and books proposed for the work of their classes during the next Academical year. The Faculty of Science transmits such syllabuses, with such observations as it may think fit to make thereon, to the Senatus for its approval.

VII. The provisions of the preceding section do not apply to approved Institutions or recognised teachers outside Edinburgh ; but the University Court will not grant or continue recognition to any Institutions or teachers unless it is satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Edinburgh.

VIII. The subjects of study are as follows :—

1. Mathematics, including Analytical Geometry, and Differential and Integral Calculus.
2. Natural Philosophy, including Applied Higher Mathematics.
3. Chemistry.
4. A course in the Physical Laboratory or in the Chemical Laboratory, or of Practical Chemistry.

5, 6. Two Courses in Practical work in Drawing.

7, 8, 9. Three Courses in Engineering, including Engineering Laboratory Practice, and Field Work.

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[1] See footnotes 1 and 2, page 230.

10. Natural Philosophy, involving Higher Mathematics.
11. One of the following :—
    (*a*) Engineering Laboratory Practice, Mechanical or Electrical (Special Course).
    (*b*) Electricity—Pure and Applied.
    (*c*) Geology and Mineralogy.

III.—Science Examinations.

(*a*) *First Science Examination.*

IX. (1) There is a First Science Examination in the three following subjects, viz.:—(1) Mathematics, (2) Natural Philosophy, (3) Chemistry ; and the examinations in Natural Philosophy, and in Chemistry are so far as possible practical.

The examination in Geometrical Drawing may be taken either at the First or at the Final Science Examination.

(2) The examination in Mathematics includes the higher branches of Mathematics specified under Mathematics in the Section immediately preceding ; but it is optional to Candidates to pass the same examination in this subject as that required for the ordinary Degree of M.A., provided that in that case they will be required, before graduation, to pass an examination in the remainder of the subject.

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

The following Classes in the University qualify for the First Science Examination in Engineering :—

1. Mathematics—Intermediate Honours Class (Winter), or Advanced Class (Summer).
2. Natural Philosophy—As for Pure Science Degrees.
3. Chemistry—As for Pure Science Degrees.
4. Physical or Chemical Laboratories—A three months' Course in either.
5. Drawing—Class of Geometrical Drawing during one Winter Session.

(*b*) *Final Science Examination.*

X. (1) There is a Final Science Examination in the remaining subjects specified in Section VIII. ; and, if required, in the higher branches of Mathematics as provided in Section IX., Sub-section 2.

(2) Candidates may present themselves in one or more of these subjects at any examination after they have passed the whole of the subjects in the First Science Examination and have attended the required courses in the subjects professed, provided that for this purpose subjects 5, 6, 7, 8, and 9, specified in Section VIII., shall form one subject.

XI. A candidate for the degree of B.Sc. in Engineering is not deemed to have attended a class as part of the curriculum for that

degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

XII. It is competent to the Examiners for the degree of B.Sc. in Engineering to report that a candidate has passed with special distinction in one or more of the subjects professed by him; and in such a case a diploma is given setting forth the subjects in respect of which the degree has been granted, and the subject or subjects in which special distinction has been obtained.

XIII. It is competent to the University Court to modify from time to time the provisions as to the curriculum, in case such modification be rendered desirable by the development of Engineering Science, or in consequence of further provisions having been made within or without the University for the study of any branch of the said Science: Provided that in no case shall the number of full courses of study required be less than the number required for the degree of B.Sc. in Pure Science.

The following Classes in the University qualify for the Final Science Examination in Engineering:—

1. Drawing—Class of Engineering and Mechanical Drawing during one Winter Session.
2. Engineering—(*a*) Class of Systematic Engineering during two Winter Sessions. (*b*) Class of Engineering Field-Work, held in Summer.
3. Engineering Laboratory, or Electricity (Pure and Applied), or Geology and Mineralogy—A three months' Course in either.

IV.—Doctorate of Science in Engineering.

XIV. Graduates of the University of Edinburgh who have held the degree of B.Sc. in Engineering for five years, may offer themselves for the degree of D.Sc. in Engineering.

XV. A candidate for the degree of D.Sc.[1] in Engineering must present a Thesis, or a published memoir or work, to be approved by the Senatus on the recommendation of the Faculty of Science: Provided that, if required by the Senatus, the candidate must pass such examination as may be determined. The Thesis must be a record of original research undertaken by the candidate, or of important engineering work designed by himself, and actually carried out, and must be accompanied by a declaration, signed by him, that these conditions have been satisfied.

General.

XVI. Candidates who produce certificates that they have satisfied all the conditions prescribed by these Regulations, and who have passed

[1] The Thesis must be lodged with the Dean of the Faculty on or before 1st December.

the necessary examinations, will be entitled to receive the degrees of B.Sc. in Engineering and D.Sc. in Engineering, as the case may be, on the payment of the fees required.

XVII. A student who, when these Regulations came into operation, had completed a part of his course of study with a view to graduation in Science in Engineering in the University of Edinburgh, under regulations in force at the time, and who thereafter completes his course of study and passes the necessary examinations in conformity with such regulations, or with the provisions hereof, may become a candidate for the degree of B.Sc. in Engineering.

XVIII. The degrees of B.Sc. and D.Sc. in Engineering are in no case conferred on persons who have not complied with the above conditions, and are not conferred *honoris causâ tantum*.

OUTLINE OF SUBJECTS OF EXAMINATION.

FIRST BACHELOR OF SCIENCE EXAMINATION.

1. MATHEMATICS—Two papers, one of two hours and one of three hours, to be taken at one time.[1] Subjects:—Mensuration; Trigonometrical Solution of plane triangles, involving the use of logarithmic tables (to be brought by the candidates). Curve-tracing; Elements of Cartesian and Polar Co-ordinates, including application to the analytical geometry of the straight line and the conic sections; Expansion of a determinant and elements of the theory of equations.

   Fundamental ideas of the Differential and Integral Calculus; Differentiation and Integration of Simple Functions; Geometrical Interpretation of Differentiation and Integration; Elementary application to plane curves, maxima and minima of functions of one variable, areas, volumes, centres of mass and moments of inertia; Simple Differential Equations.
2. NATURAL PHILOSOPHY, mainly Practical Physics.
3. CHEMISTRY—Same as for First Examination in Pure Science.

SECOND BACHELOR OF SCIENCE EXAMINATIONS.

1. (*a*) ENGINEERING—

Field-Work.—Surveying; Levelling; Setting out of Work; Calculation of Quantities.

Properties of Materials.—General Properties, with special knowledge of their Strength, and the Purposes to which they are applied, and some knowledge of their Cost.

Strength and Stability of Structures designed by Civil Engineers.—Metal and Timber Bridges and Roofs. Arches in Masonry. Walls.

[1] A candidate who has passed the M.A. Examination in Mathematics is exempted from the first of these papers.

Retaining Walls. Embankments. Cuttings. Breakwaters. Aqueducts. Pipes. Canals.

Strength and Form of the Elements of Machines.

Design of Combined Structures.—An elementary knowledge of the Design of Bridges and Roofs, of Reservoirs, Embankments, collecting and distributing Machinery of Waterworks, and of the main features of Railway construction, Harbours, and Drainage.

Design of Machinery.—An elementary knowledge of the construction of the Steam Engine, stationary and locomotive, of Prime Movers driven by Water, of Mill-wright work, and the general arrangement of Workshops and Factories.

Prime Movers.—Theory of Heat Engine. The Hot Air Engine. The Steam Engine. The Gas Engine. Turbines and Water Wheels. *Power Transmission*—Telodynamic, Hydraulic, Electric.

Engineering Laboratory Practice.

(*b*) DRAWING—

Candidates must exhibit a good knowledge of Geometrical Drawing, including the use of Graphics as applied in the solution of Engineering problems, and be able to represent neatly, in the usual manner employed by engineers, Plans and Sections of Buildings and Machinery, and also to make Engineering Sketches with figured dimensions from actual objects.

2. NATURAL PHILOSOPHY—

Applied Mathematics, chiefly Dynamics.

3. (*a*) ENGINEERING LABORATORY PRACTICE, MECHANICAL OR ELECTRICAL.

(*b*) ELECTRICITY—PURE AND APPLIED.

(*c*) GEOLOGY AND MINERALOGY—

Dynamical Geology.—Nature and Operation of geological agents:—The Atmosphere, Rain, Terrestrial Waters, Ice, the Sea, Plants and Animals, Volcanoes, Movement of the Earth's Crust.

Mineralogy.—Physical and Chemical characters of the more important and typical species in the various mineral groups—more especially the rock-forming minerals and ores.

Petrology.—Megascopic and Microscopic Characters, Composition, Origin and Distribution of Rocks.

Structural Geology.—Structure of Rock-Masses, Bedding, Joints, Cleavage, Foliation, Metamorphism, Faults, Unconformity.

Physiographical Geology.—Origin of the present outlines of the Earth's surface.

DOCTOR OF SCIENCE EXAMINATION.

A Candidate for this Degree will be required to offer a thesis or published memoir affording evidence of original work, and may also be required to pass a Special Examination. See page 246.

III.—PUBLIC HEALTH.

IV. Regulations and Curriculum for Degrees in Public Health.

Candidates who commenced attendance on qualifying Science Classes before 1st October 1894 are referred to the Calendar *for 1895-96, or to previous* Calendars.

I. Two degrees in Science in Public Health are conferred by the University of Edinburgh, viz., Bachelor of Science in Public Health and Doctor of Science in Public Health.

I.—Bachelor of Science.

II. Candidates for the degree of B.Sc. in Public Health must be graduates in Medicine of a University of the United Kingdom, or of some other University recognised for the purpose by the University Court of the University of Edinburgh.[1]

III. Candidates must be matriculated for the year in which they appear for examination or graduation.

(A)—*First Examination.*

IV. Candidates for the degree of B.Sc. in Public Health, before proceeding to the first examination, must produce evidence (1) that, after their graduation in Medicine, they have worked for at least twenty hours per week during a period of not less than eight months, of which at least five consecutive months must be in the Public Health Laboratory of the University of Edinburgh, and the remainder in the foresaid Laboratory, or in a Public Health Laboratory recognised for the purpose by the University Court;[2] and (2) that they have attended in this University or any other Scottish University, in addition to the course of lectures in Physics qualifying for graduation in Medicine, such further course in Physics as the Senatus, with the approval of the University Court, shall deem necessary, and such a course of lectures in Geology, extending over not less than three months, as the Senatus with the like approval shall deem sufficient and appropriate.

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[1] *Universities specially recognised under this section:* The University of Würzburg; M'Gill University, Montreal.

[2] *Public Health Laboratories and Teachers recognised under this section:—*

Mason University College, Birmingham,	E. Percy F. Frankland, Ph.D., October 1894.
Liverpool School of Science and Technology,	George Tate, Ph.D. 15 June 1891.
King's College, London,	W. R. Smith, M.D., D.Sc., November 1891.
University of Aberdeen,	Professor Matthew Hay, M.D. 15 February 1891.
Pasteur Institute, Paris,	22 October 1892.
Cambridge,	13 December 1897.

The Courses in this University which at present qualify in Physics and Geology are Professor Tait's or Dr Knott's Courses in Physics, and Professor Geikie's Winter or Summer Course in Geology.

(B)—*Second Examination.*

V. Candidates for the degree of B.Sc. in Public Health are not admitted to the second examination for the degree sooner than eighteen months after having taken their degree in Medicine, nor sooner than six months after having passed their first examination for the degree of B.Sc. in Public Health, and they must have attended two separate courses in Public Health in the University of Edinburgh, or in any University of the United Kingdom, or any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical School or under such teacher as may be recognised or approved for the purpose by the University Court, each course consisting of forty lectures at least; one of these courses shall deal with Medicine and the other with Engineering, each in its relation to Public Health, in such manner as the Senatus Academicus, with the approval of the University Court, shall determine.

The lectures in this University which at present qualify are the course on Advanced Public Health, by the Professor of that subject, and the course of instruction (Theoretical and Practical) in Sanitary Engineering and Building Construction by the Professor of Engineering.

They must also give evidence (1) that for six months they have practically studied sanitary work under the Medical Officer of Health of a county or burgh or district, containing a population of not less than 25,000; (2) that they have had three months' clinical instruction regarding fevers and infectious diseases in a hospital recognised as suitable for the purpose by the University Court; and (3) that they have had three months' instruction in Mensuration and Drawing under a teacher recognised for the purpose by the University Court.

VI. There is a first examination for the degree of B.Sc. in Public Health in (1) Laboratory Work, the examination being practical, written, and oral; (2) in Physics; and (3) in Geology, if an examination in Physics or Geology, as the case may be, qualifying for graduation either in Science or Arts has not previously been passed by the candidate.

VII. There is a second examination, written, oral, and as far as possible practical, for the degree of B.Sc. in Public Health in the following subjects, included in the course of instruction in Public Health —viz. (1) Sanitation, (2) Sanitary Law, (3) Vital Statistics, and (4) Medicine in its bearings on Public Health, and the examinations in these subjects are taken at one time.

VIII. The Board of Studies for the Faculty of Science from time to time, with the approval of the Senatus, determines and announces the character of the instruction to be given in the Laboratory, and fixes the standard of the examinations. The examination in Sanitation, pro-

vided for under this section, shall include Reports by the candidates on Dwellings, Workshops, Hospitals, and Sanitary Schemes generally.

IX. It is competent for the University Court, after consultation with the Senatus, to modify from time to time the provisions as to the work and instruction hereinbefore specified as necessary for graduating in Science in Public Health, in case such modification may be rendered desirable by the development of the Science of Public Health, or by increase of the facilities provided in the said University or elsewhere for the study of any branch of the said Science.

Schedules of the Subjects of Examination.

LABORATORY WORK.

(1.) *Examination of Water.*—Physical Properties, Chemical Properties, Microscopical Appearances, Pollution of Potable Waters.

(2.) *Examination of Air.*—Temperature, Pressure, Humidity; Carbonic Acid, Ozone, Micro-organisms, Organic Matter, Noxious Emanations.

(3.) *Examination of Foods.*—Milk, Butter, Butterine, or Oleomargarine, Flour, Bread, Starchy foods, Sugar, Honey, Butcher meat, Fish, Vegetables.

(4.) *Examination of Beverages.*—Tea, Coffee, Cocoa, Alcoholic Beverages, Aërated Waters.

(5.) *Examination of Condiments.*—Salt, Pepper, Mustard, Vinegar, and Preserves; Examination of Lime Juice. Nutritive Value of Dietaries.

(6.) *Sewage.*—Examination of sewage and of effluents after treatment.

(7.) *Soils.*—Temperature, Humidity, Permeability, Chemical Composition, Gases of the Soil, Micro-organisms.

(8.) *Disinfectants and Deodorisers.*—Chemical Examination of the Materials, Determination of their comparative power.

(9.) *Building Materials.*—Chemical and Physical Properties.

(10.) *Clothing.*—Physical Properties of Clothing Materials.

(11.) *Bacteriology.*—Micro-organisms in relation to Epidemic and other Diseases. Culture and recognition of Pathogenic and Non-Pathogenic, Aerobic and Anaerobic, Micro-organisms.

PHYSICS.

(1.) *Laws of Motion and Properties of Matter.*—Elasticity, Density, Porosity, Divisibility, Viscosity, &c.

(2.) Elements of Dynamics of Solid and Fluid Bodies; Tides.

(3.) Elementary Experimental Facts regarding Energy in the common phenomena of Sound, Light, Heat, Electricity, and Magnetism.

GEOLOGY.

(1.) *Dynamical Geology.*—The nature and operation of Geological agents:—The Atmosphere, Rain, Underground Water, Rivers, Ice, the Sea, Plants and Animals, Volcanoes, Movements of the Earth's Crust.

(2.) *Mineralogy and Petrology.* Characters of the more common and widely-distributed minerals and rocks.

(3.) *Structural Geology.*—The structure of rock-masses, more especially Bedding, Joints, Faults, Intrusive Rocks. Water-supply and Draining in connection with Geological Structure. Nature and Origin of Soils and Sub-Soils.

EPIDEMIOLOGY [MEDICINE IN ITS RELATION TO PUBLIC HEALTH].

The Causes of Endemic and Epidemic Diseases, as well as of Epizootics; of the Contagious or Infectious Diseases; and of those incidental to particular trades, or otherwise produced by the surroundings of the patient. Prophylaxis. Immunity. Vaccination against disease. Nature and Value of Vaccines.

SANITATION.

(1.) *Site, Environment, and Construction of Dwellings.* Influence of Position, Aspect, and Climate; Meteorological and Geological Conditions; Soil and Drainage; Elements of Building Construction.

(2.) *Water Supply.*—Quantity per head; Relative Eligibility of available Sources of Supply; Estimation of yield; Methods of utilising various Sources of Supply; Storage, Subsidence, and Filtration; Distribution—(α) General, (β) Domestic; Causes, Detection, and Treatment of contaminated Supply.

(3.) *Air Supply.*—Quantity and Temperature, with knowledge of use of instruments employed in their Measurement; Causes and Detection of Impurities; Warming and Ventilation; Characteristics and Fitness of various methods in use.

(4.) *Excreta, Refuse, and Sewage.*—Character and Quantity of in (α) Urban, (β) Rural Districts—

A. Collection and Removal from (1) the Dwelling, (2) the Town or Village; Nature, Practical details, and maintenance of the several methods employed.

B. Disposal: (1) Sanitary, (2) Insanitary methods; Precipitation, Filtration, Irrigation, Discharge; General details of necessary works.

(5.) *General Structural and Mechanical Details of Sanitary Works.*—Character, Fitness, and Qualities of Materials (Brick, Cement, Earthenware, Iron, Lead); Design, setting out, and laying of Sewers; Plumbing and Iron-work.

(6.) *Hospitals.*—Principles of Design and Construction.

(7.) *Infectious and Epidemic Diseases.*—Origin, Modes of Propagation, and Means of Prevention; Epizootics.

(8.) *Disinfectants.*—Selection and application.

(9.) *Effects of Insanitary Conditions.*—Insufficient house accommodation, Vitiation of Air, Impure Water, Bad or insufficient Food.

(10.) *Unhealthy Occupations.*—Means of mitigating or removing their unhealthiness.

(11.) *Nuisances.*—Urban, Rural, and Domestic.

(12.) *Disposal of the Dead.*—Burial, Cremation.

N.B.—Candidates are required to be able to interpret plans submitted to them, and to illustrate their answers when necessary by sketch plans and diagrams drawn to scale.

SANITARY LAW.

1. Sanitary Administration. Laws affecting Factories, Workshops, Mines, Common Lodging-houses, Removal of Refuse, Nuisances, Rivers Pollution, Alkali Works, Burial Grounds, Unwholesome Food, Adulteration of Food and Drugs. Sale of Poisons.

VITAL STATISTICS.

2. Methods of estimating Population. Death, Birth, and Marriage Rates. Mortality as affected by Age, Sex, and Occupation. Case Mortality. Life Tables.

NOTE.—In making calculations, the Candidate will be expected to understand the use of Logarithms, the Slide Rule, and Arithmometer.

II.—DOCTORATE OF SCIENCE.

X. Graduates who have held the degree of B.Sc. in Public Health from the University of Edinburgh for a term of five years may offer themselves for the degree of D.Sc. in Public Health in the said University.

XI. Candidates for the degree of D.Sc. in Public Health must present a thesis, or a published memoir or works,[1] to be approved by the Senatus, on the recommendation of the Faculty of Science, and are required to pass an examination in Public Health, and in such of its special departments as the Senatus, with the approval of the University Court, may determine. [Candidates for D.Sc. in Public Health may appear for examination in any one of the departments of knowledge required for the degree of B.Sc. in Public Health. They are required to submit the subject in which they propose to be examined for approval at least two months before the date of the Examination.[1]]

The theses, or published memoirs or works, must be records of original research undertaken by the candidates, and must be accompanied by a declaration, signed by them, that the work has been done and the theses or memoirs composed by themselves.

GENERAL.

XII. Candidates who produce certificates that they have satisfied all the conditions prescribed by this Ordinance, and who have passed the necessary examinations, are entitled to receive the degrees of B.Sc. in Public Health and D.Sc. in Public Health, as the case may be, on payment of the fees required.

[1] The Thesis must be lodged on or before 1st December, and the Subject of Examination must be submitted to the Dean before 20th January. The Examination will take place about the end of March.

XIII. Students who, at the time when these Regulations come into operation, have completed a part of their course of study with a view to graduation in Science in Public Health in the University of Edinburgh, under regulations in force at the time therein, and thereafter completes the course of study and passes the necessary examinations in conformity with such regulations, or with the provisions hereof may become candidates for the degree of B.Sc. in Public Health.

XIV. The degrees of B.Sc. and D.Sc. in Public Health are in no case conferred on persons who have not complied with the conditions hereinbefore set forth, and are not conferred *honoris causâ tantum*.

IV.—AGRICULTURE.

Regulations and Curriculum for Graduation in Agriculture.

Candidates who began attendance on Qualifying Science Classes before 1st October 1893, *are referred to* Calendar 1895-96, *or to previous* Calendars.

I. A degree of Bachelor of Science in Agriculture is conferred by the University of Edinburgh.

I. Preliminary Examination.

II. Every candidate for the degree of B.Sc. in Agriculture must pass the Preliminary Examination[1] prescribed for Degrees in Pure Science; and the conditions imposed with respect thereto by the said Regulations are applicable in all respects to the Degree in Agriculture, except as follows:—The Preliminary Examination must be passed before the candidate presents himself for any part of the First Science Examination, but not necessarily before the candidate enters on his curriculum.

Courses of Instruction.

III. (1) Candidates must, in the course of not less than three Academical years (*i.e.* three Winter Sessions, or two Winter Sessions and three Summer Sessions), attend at least eleven courses of instruction in subjects prescribed for examination under Section VIII. hereof.

(2) It is the duty of the Senatus to determine from time to time which of the said courses are full courses and which are half courses respectively, and also to determine the number of meetings of which such full courses and half courses respectively shall consist, and to report its determination to the University Court for its approval.

IV. (1) Five full courses or their equivalent (counting two half courses as one full course) must be taken in the University of Edinburgh, and must include the course in Agriculture and Rural Economy.

(2) The remainder of the said courses may be taken in other Universities or Institutions approved by the University Court, or under teachers

[1] See page 228.

recognised by the University Court for purposes of graduation in Science in Agriculture :[1] Provided that the fees for attendance at an approved Institution in Edinburgh or under a recognised teacher there must not be less than the fees exigible for the corresponding courses in the University of Edinburgh.

(3) Residence and practical work at a farm is required of each candidate to such an extent and under such regulations as the Senatus, with the approval of the University Court, may from time to time appoint.[2]

V. The University Court may make regulations to enable candidates, not matriculated students of the University of Edinburgh, availing themselves of the permission to attend lectures at approved Institutions or by recognised teachers in Edinburgh, to obtain, on payment of a fee not exceeding in amount the matriculation fee paid by the students of the University, a right to the use of the Library of the University.

VI. (1) It is the duty of the Professors and Lecturers annually, at the end of each winter session, to submit to the Senatus a scheme specifying what proportion of the courses is to be devoted to lectures, practical demonstrations, examinations, and tutorial work respectively. The Senatus transmits such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(2) It is the duty of the Professors and Lecturers annually at the end of each winter session to submit to the Faculty of Science, for its consideration, a syllabus of the subjects and books proposed for the work of their classes during the next Academical year. The Faculty of Science transmits such syllabus, with such observations as it may think fit to make thereon, to the Senatus for its approval.

VII. The provisions of the preceding section do not apply to approved institutions or recognised teachers outside Edinburgh; but the University Court will not grant or continue recognition to any Institutions or teachers unless it is satisfied that their courses of instruction are equivalent to the courses sanctioned in the University of Edinburgh, where such exist.

VIII. The subjects of study are as follows[1] :—

1. Mathematics, or Biology (*i.e.* Zoology and Botany).
2. Natural Philosophy.
3. Chemistry.
4. Agriculture and Rural Economy.
5. Agricultural Chemistry.
6. Geology.
7. Veterinary Hygiene.
8. Agricultural Entomology.
9. Economic Science as applied to Agriculture.
10. A course in one of the following :—(*a*) Forestry ; (*b*) Experimental Physics ; (*c*) Engineering.
11. Engineering Field Work.

[1] See footnotes 1 and 2, page 230.

[2] Residence and Practical work at a farm must be not less than twelve months.

II. Science Examinations.

(*a*) *First Science Examination.*

IX. (1) There is a First Science Examination in the three following subjects—viz. (1) Mathematics, or Biology (*i.e.* Zoology and Botany); (2) Natural Philosophy; (3) Chemistry.

(2) The examination in all these subjects is the same as the examination in these subjects for the degree of B.Sc. in Pure Science, as specified in the Regulations therefor.

The following courses in this University qualify for the First Science Examination in Agriculture:—

1. (1) Senior Mathematics of 100 Lectures, as for the degree in Pure Science, or (2) Biology (Zoology, Botany) as for Pure Science.

2. Natural Philosophy, as for Pure Science.

3. Chemistry, full course, including Practical Chemistry, as for Pure Science.

(3) Candidates may present themselves in any one or more of the subjects of the First Science Examination at any examination held after they have attended a full course in the subject or subjects professed.

(*b*) *Final Science Examination.*

X. (1) There is a Final Science Examination in the remaining subjects (4 to 11 inclusive) specified in Section VIII. hereof.

(2) Candidates may present themselves in any one or more of these subjects at any examination held after they have passed the whole of the subjects comprised in the First Science Examination, and have attended the required courses in the subjects professed.

The following courses qualify for the Final Science Examination in Agriculture:—

1. Agriculture and Rural Economy—Full course of about 100 Lectures and 10 Field Demonstrations.

2. Agricultural Chemistry—Full course (including Lectures and Practical Work) of about 100 hours.

3. Geology—Half-course of 25 Lectures, 10 Demonstrations in Laboratory, and 8 Field Demonstrations.

4. Veterinary Hygiene—Half-course of about 50 Lectures.

5. Agricultural Entomology—Half-course of about 20 hours.

6. Economic Science, as applied to Agriculture—Half-course of about 50 Lectures—the Political Economy Class in Arts till Christmas.

7. A course in one of the following:—

(*a*) Forestry—Full course of about 100 Lectures.

(*b*) Experimental Physics—Full Laboratory course of 100 hours.

(*c*) Engineering—Full course of about 100 hours.

8. Engineering Field Work:—Half-course, extending over three weeks, 75 hours—Lectures, Drawing Office, and Field.

XI. If a student, before passing the Preliminary Examination, has attended a class qualifying for graduation, the Senatus may, on special

cause shown, permit him to count such class for graduation, on condition of his passing the full Preliminary Examination within such time thereafter as the Senatus may appoint, and in every such case the Senatus reports to the University Court the reasons for the relaxation.

XII. A candidate for the degree of B.Sc. in Agriculture shall not be deemed to have attended a class as part of the curriculum for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

GENERAL.

XIII. Candidates who produce certificates that they have satisfied all the conditions prescribed by these Regulations, and who have passed the necessary examinations, will be entitled to receive the degree of B.Sc. in Agriculture, on payment of the fees required.

XIV. A student who, at the time when these Regulations came into operation, had completed a part of his course of study with a view to graduation in Science in Agriculture in the University of Edinburgh, under regulations in force at the time therein, and who thereafter completes his course of study and passes the necessary examinations in conformity with such regulations, or with the provisions of these Regulations, may become a candidate for the degree of B.Sc. in Agriculture.

XV. The degree of B.Sc. in Agriculture shall in no case be conferred on persons who have not complied with the conditions hereinbefore set forth, and shall not be conferred *honoris causâ tantum*.

OUTLINE OF SUBJECTS OF EXAMINATION.

FIRST BACHELOR OF SCIENCE EXAMINATION.

1. (*a*) MATHEMATICS, or (*b*) BIOLOGY (*i.e.* ZOOLOGY and BOTANY).

2. NATURAL PHILOSOPHY.

3. CHEMISTRY, including Practical Chemistry.

The Examinations are the same as for the First B.Sc. in Pure Science.

FINAL BACHELOR OF SCIENCE EXAMINATION.

1. AGRICULTURE AND RURAL ECONOMY: ITS SCIENTIFIC PRACTICE.

1. *Definition of Agriculture.*—Aid given by the Allied Sciences.

2. *Surface Geology.*—Formation and Classification of Soils—their Physical and Chemical Properties. Importance of Organic Nitrogen. Indications of good or bad Soils—the Methods of Management.

3. *Drainage and Cultivation.*—Practice and Advantages of Drainage—Irrigation—Wet-Warping—Mixing or Top-Dressing—Claying—Marling—Chalking—Liming—Paring and Burning—Clay-Burning. The Effect on Soils of Cultivation and the Growth of Plants.

4. *Implements and Machines of the Farm.*—The Importance of their proper Construction and Careful Management.

5. *Steam Cultivation.*—Its Advantages and Disadvantages.

6. *The Motive Powers Employed on the Farm.*—1st, Man; 2d, Horse; 3d, The Mechanical Powers (Water, Wind, and Steam)—their Comparative Values and Advantages.

7. *Farm Servants.*—Their Labour and Wages—Day-work and Piece-work. Detailed and total costs of Horse and Hand Labour.

8. *The Importance of Rotations.*—Different Rotations and reasons why they are adopted—Systems of Farming.

9. *Our Farm Crops* (Grain, Root, Forage, and Hay Crops).—Their Selection and Growth—Prevention of Insect Injuries and Diseases.

10. *Identification of Grasses and other Valuable Pasture Plants.*—Character and Habits of those of importance—Detection of Adulterations.—Regulations necessary to protect the Farmer in buying Seeds.

11. *The Management of Permanent Pasture.*—Proper Methods of making new Pasture—its After-treatment.

12. *Weeds in Pastures* and Means of Destroying them.

13. *Silage and the System of Ensilage.*—Its Advantages, &c.—Its Suitability and Unsuitability according to Locality.

14. *Manures.*—Farm-yard Manure—its proper Mixing, Storing, and Application—its great advantage as a General Manure. Special Manures and so-called Artificials—their Uses, Abuses, and Adulterations—the proper Times and Methods of their Application. The Value and Use of Liquid Manure and Town Sewage.

15. *Buildings and Fences.*—The proper Construction of Fences—the General Arrangement of Farm-Buildings—the best Flooring and Inside Plans and Dimensions of Byres, Cattle-Sheds, Stables, &c.—Covered Yards—Ventilation—Drainage of Houses and Farm-yards.

16. *Live-Stock, embracing Cattle, Pigs, Horses, Sheep.*—The Various Breeds of each, and suitability of some to Local Conditions—"The Principles of Breeding." Feeding and Management—Cost of Feeding—Proper Mixtures of Food to Use. Cost of the Production of a Stone of Beef, Mutton, and Pork, showing the Amount of Profit in each Case.

17. *Dairying in all its Branches*, including the suitability or otherwise of surrounding Conditions—the proper Classes of Dairy Stock to keep, and their Management—the Treatment of Milk, and its Sale or Manufacture into Cheese, Butter, &c.

18. *Feeding Stuffs.*—Suitability of the Common Food Substances to the Different Classes of Farm Stock—The Purchase, Storing, and Administration of the same—their Manurial Residues.

2. Agricultural Chemistry.

1. *Atmosphere.*—Relation of its Constituents and Conditions to Plant Life.

2. *Soils.*—Origin, Formation, Composition, Biology, Amelioration.

3. *Plants.*—Constituents, Germination, Nutrition, Maturation, Symbiosis.

4. *Manures.*—Nature, Uses, Application, Valuation, Compatibility, Exhaustion.

5. *Crops.*—Classification, Relation, Preservation, Uses as Fodder, Residual Value.

6. *Animal Nutrition.*—Nutritive Processes, Laws of Flesh and Fat Production, Digestibility of Fodders, Nutrient Ratio, Relation of Food to Work and to Manure.

7. *Dairy.*—Composition of Dairy Products, Circumstances affecting Quantity and Quality, Scientific Management.

Tests for the detection of Potassium, Sodium, Ammonium, Magnesium, Calcium, Aluminium, Iron, Arsenic, Antimony, Copper, Lead, Mercury.

Sulphate, Sulphite, Sulphide, Phosphate, Carbonate, Nitrate, Chloride, Acetate, Oxalate, Tartrate, Citrate.

Sugars, Starches, Fats, Proteids.

Chemical, Physical, and Microscopic Tests for Adulteration in Manures, Feeding Stuffs, and Dairy Produce.

Methods of determining of Clay, Sand, Carbonates, Humus, and Moisture in Soils.

Phosphoric Acid, Potash, Nitrogen, Lime, Magnesia, Insoluble Matter and Moisture in Soils and Manures.

Albumen, Amides, Fat, Carbohydrates, Woody Fibre, and Ash in Fodders.

3. Geology.

(1) *Physical Geography and Dynamical Geology.*—The nature and operation of Geological agents:—The Atmosphere, Rain, Underground Water, Rivers, Ice, the Sea, Life, Earthquakes, Volcanoes, Movements of Upheaval and Depression.

(2) *Mineralogical and Petrological Geology.*—Characters of the principal Rock-forming Minerals: Composition, Origin, and Distribution of the more important and commonly occurring Rocks.

(3) *Structural Geology.*—The Structure of Rock-masses, more especially Bedding, Joints, Faults, and Denudation.

(4) *Agricultural Geology.*—Nature and Origin of Soils and Subsoils: Draining in connection with Geological Structure; Mineral substances used as Manures.

4. Veterinary Hygiene.

1. The Comparative Osteology (rudimentary) of the Horse, Ox, and Sheep.

2. The Physiology of Dentition in Horse, Ox, Sheep, and Pig, more especially as indicative of the Age of the Animal.

3. The Physiology of Gestation; the Diseases incidental to the pregnant state, and also those consequent to the act of parturition.

4. Description of the Digestive Organs of the Horse, Ox, and Sheep (separately), also their Physiology, and most ordinary Diseases.

5. Contagious and other Diseases of Farm Stock. Prevention and Treatment of Diseases.

5. Agricultural Entomology.

Insect pests of cultivated crops, of forest and fruit trees, and of farm live stock. Methods of prevention of, and of remedy for, their attacks. Classification of insects, and details of their structure and life history, in so far as of economic importance.

6. Economic Science.

See Syllabus in Arts. First Half of Course.

7. (*a*) Forestry.

1. *Sylviculture.*—Atmosphere, Climate, and Soil, as affecting Forest Vegetation; shape and development of forest trees; pure and mixed woods; the sylvicultural systems; formation and tending of woods.

2. *Injuries to Standing Woods and their Protection.* Winds and storms, fires, animals, fungi, weeds, frost, snow, drought, &c.

3. *Utilisation of Produce.*

4. *Structure, Classification, and Technical Properties of Timber.*

5. *Forest Organisation.*—The principles on which working plans are based.

6. *Uses and Effects of Forests.*

7. (*b*) Experimental Physics.

The Measurement of Physical Constants, such as—Gravitation, Specific Gravity, Specific Heat, Conductivity, Dilatation, Refractive Index, Magnetic and Electric Quantities, &c.

7. (*c*) Engineering.

1. *Mechanics.*—(*a*) Principles of Statics; couples; moments of forces; parallel and inclined forces; centre of gravity; moments of inertia; friction, (*b*) Principles of Kinematics and Kinetics; Newton's laws of motion; Conservation and transformation of energy.

2. *Strength and Properties of Structural Materials*, including their fitness and adaptability, together with some knowledge of their cost.

3. *Strength and Stability of Structures.*—General knowledge of the design, construction, and maintenance of Roads, Roofs, Bridges, Embankments, Retaining Walls, Aqueducts, and General Buildings.

4. *Hydraulics.*—The laws governing the flow of water in open and closed channels, and its discharge through orifices; Systems of Drainage and Irrigation; Pumps, &c.

5. *Mechanism and Machinery.*—General Principles and means of transmission, conversion, and modification of motion; general millwright work with special reference to the machines ordinarily employed for agricultural purposes.

6. *Prime Movers.*—A knowledge of the sources and modes of estimating power; The Steam Engine; Pneumatic Machines; Hydraulic Motors, Water-wheels, Turbines, &c.

8. Engineering Field Work.

Surveying, with special reference to Estate and Parish Surveying, Levelling, Gauging of Streams and Rivers, Plotting of Surveys and Sections, Setting out of Work, and Calculation of Quantities.

FEES FOR EXAMINATIONS FOR DEGREES.

1. Preliminary Examination.

The Fee is 10s. 6d. for each appearance.

2. Fees for Examinations or for Registering Equivalents.

(1) *Pure Science and Engineering*—			
First B.Sc. Examination, (or for each subject, £1, 1s.)	£3	3	0
Second B.Sc. Examination,	3	3	0
Doctor of Science,	10	10	0
	£16	16	0
(2) *Public Health*—			
First B.Sc. Examination,	£3	3	0
Second B.Sc. Examination,	3	3	0
For the Degree of Doctor,	10	10	0
	£16	16	0
(3) *Agriculture*—			
First B.Sc. Examination, (or for each subject, £1, 1s.)	£3	3	0
Second B.Sc. Examination,	3	3	0
	£6	6	0

Candidates for the Degree of B.Sc. who fail to pass pay a fee of 10s. 6d. for re-examination in each subject, and Candidates for D.Sc. pay a fee of £5, 5s. for each re-examination.

Every Candidate for Graduation must pay the Fee of £1 for Regis-

tration as a Member of the General Council of the University, at least one clear day before the date of Graduation.

All communications relating to the Curriculum and Examinations for Degrees, Fellowships, Scholarships, &c., in Science should be addressed to *The Dean of the Faculty of Science*, University, Edinburgh.

All Examination, Matriculation, and Registration Fees are payable at the *Matriculation Office*, University. Candidates may pay the Fees personally, or transmit them to T. GILBERT, by *Post Office*, or *Postal Orders*, or by *Bank Drafts*, crossed "Union Bank of Scotland (Hunter Square Branch), Edinburgh," but not by cheques on private accounts.

TIME TABLE OF EXAMINATIONS AND DATES FOR PRESENTING CERTIFICATES AND PAYMENT OF FEES.

Candidates are required to enter for each periodical examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.

The dates of the Examinations for 1899-1900 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination:—

PRELIMINARY EXAMINATION.[1]

1899.		
Sept. 19.	Tues.	Names to be given in, and Fees paid, *on or before* this date.
,, 29.	Fri.	Italian, 2-5.
,, 30.	Sat.	English, 9-11, 12-2; Lower Greek, 3-6.
Oct. 2.	Mon.	Lower Latin, 9-12.
,, 3.	Tu.	Higher Latin, 9-11, 12-2; French, 1st paper, 3-4.30.
,, 4.	Wed.	Higher Greek, 9-11, 12-2; German, 1st paper, 3-4.30.
,, 5.	Thur.	Higher and Intermediate Mathematics, 9-11, 12-2; French, 2nd paper, 3-5.
,, 6.	Fri.	German, 2nd paper, 9-11; Dynamics, 1-4.

[1] When names are not entered, nor fees paid, on or before the stated dates, or a Pass obtained where the fee has been previously paid, a late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. This fee will not be received after Twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his name and pay the fee, or, when the fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear. A Candidate is not held to be entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

1900.			
Mar.	1.	Th.	Names to be given in, and Fees paid, *on or before* this date.
,,	23.	Fri.	Italian, 2-5.
,,	24.	Sat.	English, 9-11, 12-2; Lower Greek, 3-6.
,,	26.	Mon.	Lower Latin, 9-12.
,,	27.	Tu.	Higher Latin, 9-11, 12-2; French, 1st paper, 3-4.30.
,,	28.	Wed.	Higher Greek, 9-11, 12-2; German, 1st paper, 3-4.30.
,,	29.	Thur.	Higher and Intermediate Mathematics, 9-11, 12-2; French, 2nd paper, 3-5.
,,	30.	Fri.	German, 2nd paper, 9-11; Dynamics, 1-4.

FIRST SCIENCE EXAMINATION.[1]

1899.			
Oct.	4.	Wed.	Names to be given in, Certificates shown, and Fees paid, *on or before* this date.
,,	12.	Thur.	Mathematics, 9-11, 11.30-1.30; Natural Philosophy, 2.30-4.30.
,,	13.	Fri.	Natural Philosophy, 9-11; Mathematics for Engineering, 11.30-1.30, 2.30-5.30.
1900.			
Mar.	6.	Tu.	Names to be given in, and Fees paid, *on or before* this date.
,,	23.	Fri.	Certificates to be examined from 10-3.
,,	24.	Sat.	Practical Chemistry, at hours to be announced (also on subsequent days if necessary).
,,	26.	Mon.	Chemistry, 10-12; Oral Examination may begin; Laboratory Work (Public Health), 10-12; Physics (Public Health), 1-3.
,,	27.	Tu.	Botany, 10-12; Zoology, 1-3; Geology (Public Health), 1-3.
,,	28.	Wed.	Practical Work in Public Health Laboratory begins.
April	4.	Wed.	Mathematics, 3-5.
,,	5.	Thur.	Mathematics, 9-11; Drawing (Geometrical), 9-12.
,,	6.	Fri.	Natural Philosophy, 9-11, 11.30-1.30.
July	6.	Fri.	Names to be given in, and Fees paid, *on or before* this date.
,,	19.	Th.	Certificates to be examined from 10-3.
July	21.	Sat.	Practical Chemistry at hours to be announced (also on subsequent days if necessary).

[1] See footnote, page 262.

1900.

July 23. Mon. Chemistry, 10-12; Oral Examination may begin.
Laboratory Work (Public Health), 10-12; Physics (Public Health), 1-3.

,, 24. Tu. Botany, 10-12; Zoology, 1-3; Geology (Public Health), 1-3.

,, 25. Wed. Practical Work in Public Health Laboratory begins.

FINAL SCIENCE EXAMINATION.[1]

1899.

Oct. 3. Tu. Names to be given in, Certificates shown, and Fees paid, *on or before* this date.

,, 13. Fri. Zoology, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.

,, 14. Sat. Astronomy, 9-12 (1st paper), 1-3 (2nd paper).

1900.

Mar. 6. Tu. Names to be given in, and Fees paid, *on or before* this date.

,, 22. Thur. Economic Science (Agriculture), 2-4.
Certificates to be examined.

,, 26. Mon. Botany, 9-12 (1st paper), 1-3 (2nd paper); Pract. Exam. at time to be arranged; Vet. Hygiene, 1-3.

,, 28. Wed. Medicine (Public Health), 10-12; Sanitary Law, 1-3; Vital Statistics, 4-6.

,, 29. Th. Sanitation, 10-12, 1-4.
Oral and Pract. Exam. at times to be arranged.
Geology (Agric. and Engineering), 1-3.

,, 30. Fri. Physiology, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.
Agriculture, 9-12; Agricultural Chemistry, 1-3; Practical Examination in Agricultural Chemistry, at time to be arranged.

April 2. Mon. Mathematics, 9-12, 2-5; Engineering, 9-11, 3-5.

,, 3. Tu. Mathematics, 9-12; Natural Philosophy, 2-5; Engineering, 9-12; Engineering Field-Work (Agriculture), 3-5; Dynamics (Engineering), 2-5.

,, 4. Wed. Natural Philosophy, 9-12, 2-5; Engineering, 9-11; Engineering (Agriculture), 9-11; Experimental Physics (Agriculture), 3-5.

,, 5. Thur. Experimental Physics, 9-12; Agricultural Entomology, 9-11; Forestry, 11.30-1-30; Drawing (Engineering), 9-12, 2-5.

July 6. Fri. Names to be given in, and Fees paid, *on or before* this date.

[1] See footnote, page 262.

1900.

July	20.	Fri.	Certificates to be examined.
,,	23.	Mon.	Chemistry, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.
,,	24.	Tu.	Geology, 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.
,,	25.	Wed.	Human Anatomy (including Anthropology), 9-12 (1st paper), 1-3 (2nd paper); Practical Examination at time to be arranged.

Doctor of Science.[1]

D.Sc. Candidates are required to lodge their Theses and proof of their eligibility with the *Dean of the Faculty of Science* at the Matriculation Office, and to pay the Fees on or before 1st December.

Candidates for D.Sc. in Public Health are required to intimate the subjects in which they desire to be examined to the Dean before 20th January. The examination will take place about the end of March.

Degrees in Science.

DOCTORS OF SCIENCE.

The names of the Doctors of Science previously to 1889, will be found in the Historical Appendix to List of Graduates published in 1889, pp. 132-134. The following are the names of the Doctors from 1889 to 1899, both years included :—

In Pure Science.

1889. Thomas Rhymer Marshall.
1890. Alex. Crichton Mitchell.
,, Hugh Marshall.
1891. William Cossar Mackenzie.
,, Thomas Smith Murray.
1892. Jacques François Marais, B.A.
1893. John Shields.
1894. Malcolm Laurie, B.Sc.
,, Charles Hunter Stewart, M.B., C.M., B.Sc.
1895. Arthur Pillans Laurie, B.Sc.
1896. John Carruthers Beattie, B.Sc.
,, John Charles Mitchell, B.Sc.
1897. Frederick Beddow, B.Sc.
,, Alexander Morgan, M.A., B.Sc.
,, Gregg Wilson, M.A., B.Sc.
1898. Robert Stewart MacDougall, M.A., B.Sc.
,, Joseph Prokop Pražák, Ph.D., D.Jur.

In Engineering.

1898. John Thomas Nicolson.

[1] See footnote, page 262.

IN PUBLIC HEALTH.

1890. James Anderson, M.D.
,, James Andrew Blair, M.B.
,, William John Brock, M.B.
,, John Stevenson, M.B.
1892. Charles Henry Bedford, M.D.
,, Robt. Wm. Dickinson Mac-Martin Cameron, M.D.
,, Alex. C. Houston, M.B., C.M.
,, William George Aitchison Robertson, M.D.
1893. Edward Henry Ezard, M.D.
,, John Howard-Jones, M.B.
1893. John Fred. Joseph Sykes, M.B.
,, James Buchanan Young, M.B.
1894. Henry Halcro Johnston, M.D.
,, John Macmillan, M.A., M.B., C.M.
,, Charles Templeman, M.D.
1898. Walter Holland Ogilvie, M.B., C.M., B.Sc.
,, Charles Hubert Bond, M.D., B.Sc.
,, Charles Killick Millard, M.D., B.Sc.

Degrees Conferred in 1898-99.

THE DEGREE OF DOCTOR OF SCIENCE.

14th April 1899.

John Henderson, B.Sc. *Thesis*—"The Clark Cell *versus* the Cadmium Cell as a Standard of Electro-Motive Force," &c.

IN ENGINEERING.

30th July 1898.

John Thomas Nicolson, B.Sc. *Thesis*—"Experimental Researches on the Steam Engine."

IN PUBLIC HEALTH.

30th July 1898.

Charles Hubert Bond, M.D., B.Sc. *Thesis*—"The Suitability of Chalk-lands for the Disposal of Sewage—Some Points Determined by Experiment."

Charles Killick Millard, M.D., B.Sc. *Thesis*—"The Natural History of Variola."

14th April 1899.

John Penny, M.B., C.M., B.Sc. *Thesis*—"Experimental Research on the Bacillus Typhosus (Eberth-Gaffky) in Sludge."

THE DEGREE OF BACHELOR OF SCIENCE.

30th July 1898.

Alfred Archibald Boon, B.A.
*William Elliot Carnegie Dickson.
James Lornie, M.A.
*William Guthrie Porter.
†Thomas Archibald Sprague.

* Passed with Special Distinction in Anatomy and Anthropology.
† Passed with Special Distinction in Botany.

29th October.

Alan Wilfrid Cranbrook Menzies, M.A.

14th April 1899.

*John William Eastham.
Ellice Martin Horsburgh, M.A., B.Sc. (Engin.).
†Andrew Hunter, M.A.
James Robert Milne.
James Hunter Harvie Pirie.
Alexander Speirs, M.A.
Subharama Swaminadhan, M.A., LL.B.

In Engineering.

14th April 1899.

Cyril Reginald Sprague.

In Public Health.

30th July 1898.

Edward Daniel Wilson Greig, M.B., C.M.

14th April 1899.

Victor George Alexander, M.B., Ch.B.
David Macquorn-Rankine Crichton, M.B., C.M.
Charles Monro Hector, M.D.

In Agriculture.

14th April 1899.

Eric Arthur Nobbs.

Fellowships, Scholarships, Bursaries, Prizes, &c., in Science.

I. FELLOWSHIPS.

See note under Scholarships, page 171.

I.—THE FALCONER MEMORIAL FELLOWSHIP.

This Fellowship was founded in 1869 by the Subscribers to the Fund for a Memorial to Hugh Falconer, M.D. (for many years Superintendent of the H. E. I. Company's Botanic Gardens at Suharunpoor and Calcutta), and the Association for the better Endowment of the University, for the encouragement of the Study of Palæontology and Geology. It is of the annual value of £114, and is tenable for two years, but if the Senatus see fit, it may be held for three years, and with consent of the University Court, for four years. It is awarded after competitive examination in Natural History as applied to Palæontology and Geology, and is open to Graduates in Science or

* Passed with Special Distinction in Botany.
† Passed with Special Distinction in Physiology.

Medicine of this University of not more than three years' standing at the time of the competition. It cannot be held along with any other Fellowship, Scholarship, or Bursary in any Scottish University. The Deed of Foundation will be found at p. 270 of the CALENDAR for 1870-71. The next appointment may be made in July 1901.

1898. Not awarded.

1899.

II. GEORGE HERIOT'S RESEARCH FELLOWSHIPS.

These Scholarships are in Mathematical, Physical, Experimental, and Natural Sciences. For particulars apply to DAVID LEWIS, Treasurer, George Heriot's Trust, 20 York Place, Edinburgh; and see under Faculty of Arts.

II.—SCHOLARSHIPS.

I. BAXTER PHYSICAL SCIENCE SCHOLARSHIP.

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1895, and is of the annual value of £70, 1s. 2d., tenable for two years. It is awarded, on the result of the Final Examination for the Degree of Bachelor of Science, to the student who is most distinguished in two or more of the Physical Science subjects—viz., Mathematics, Natural Philosophy, Astronomy, Chemistry, either in the year preceding a vacancy, or in the year in which a vacancy occurs. The holder is required to satisfy the Senatus Academicus that he has been pursuing his studies in Science during the first year of his tenure in such a manner as the Senatus may fix. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100. Next vacancy in 1900.

1898. *John Forbes Cameron, M.A., B.Sc.*

II.—BAXTER NATURAL SCIENCE SCHOLARSHIP.

This Scholarship was founded by Sir David Baxter, Bart., of Kilmaron, in 1895, and is of the annual value of £70, 1s. 4d., tenable for two years. It is awarded, on the result of the Final Examination for the Degree of Bachelor of Science, to the Student who is most distinguished in two or more of the Natural Science subjects—viz., Human Anatomy, including Anthropology; Physiology, including Histology; Geology, including Mineralogy; Zoology, including Comparative Anatomy; Botany, including Vegetable Histology, either in the year preceding a vacancy, or in the year in which a vacancy occurs. The holder is required to satisfy the Senatus Academicus that he has been pursuing his studies in Science during the first year of his tenure in such manner as the Senatus may fix. It cannot be held with any other Scholarship, Fellowship, or Bursary, or with any situation yielding an annual income of £100. Next vacancy in 1900.

1898. *James Peter Hill, B.Sc.* (*resigned*).
W. E. Carnegie Dickson, B.Sc.

III.-VIII.—VANS DUNLOP SCHOLARSHIPS.

These Scholarships are each of the annual value of £100, and are tenable for three years. The following are the General Regulations:—

Competitors must have regularly attended at least one full Course or two Half-Courses in the University of Edinburgh during each Academic year in which they claim to have been Matriculated Students, and no Candidate is eligible who has discontinued attendance at the University of Edinburgh for more than one year. The years of Academic study count from the first year in which a Candidate has attended one of the classes qualifying for the degree of B.Sc.

Each Scholarship is tenable for three years, on condition that the scholar submits annually to the University evidence that he is prosecuting his studies or his professional work in a manner satisfactory to the Senatus. The evidence may consist of—(1) A certificate of attendance on lectures or laboratories approved by the Senatus; or (2) a certificate of having acted as an assistant to a Professor in this or some other University; or (3) a written report of his work done during the year, together with a Thesis composed by himself in connection with some part of that work.

Not more than one of these Scholarships can be held by the same person. Scholars cannot hold, along with their Scholarships, any other Fellowship, Scholarship, or Bursary in the University of Edinburgh.

Candidates must, on entering for the Examinations, produce evidence that they have fulfilled the conditions of eligibility.

Candidates, if not already matriculated, are required to pay the Matriculation Fee for the year in which the competition takes place.

The names of Candidates highly distinguished in the examinations may be published.

III.—MATHEMATICS.[1]

The next Competition will take place in April 1901.

IV.—NATURAL PHILOSOPHY.[1]

The next Competition will take place in April 1901.

V.—AGRICULTURE AND RURAL ECONOMY.

This Scholarship is open to all Matriculated Students who have regularly attended classes in this University for not less than two and not more than six years, and who have attended the Class of Agriculture and Rural Economy within one year of the date of Competition. The subjects of Examination are Agriculture, Chemistry, Botany, and Veterinary Science. The next Competition will take place in March 1901.

The Examiners are the Professor of Agriculture and an Examiner nominated by the Senatus.

1898. S. F. Ashby, B.Sc.

[1] For particulars, see "Scholarships" in Faculty of Arts.

VI.—CHEMISTRY.

(1.) The subjects of Examination are:—(*a*) Inorganic and Organic Chemistry, and the connection between the Chemical and Physical character of Substances. (*b*) Qualitative and Simple Quantitative Analysis of Inorganic Substances, and the Preparation of Pure Chemical Substances. (2) The Examination in subjects (*a*) is similar, and will be held at the same time as the Second B.Sc. Examination. The Examination in subjects (*b*) is conducted practically in the Laboratory. (3) The Competition is open to all Students of the University, from the second to the sixth year (inclusive) of their attendance, and will take place in July 1900.

1897. *J. P. Longstaff.*
A. W. C. Menzies, M.A. } *equal.*

VII.—NATURAL HISTORY, INCLUDING GEOLOGY AND BOTANY.

(1.) The subjects Natural History, Geology, and Botany are coequal in the Examination, and the Examination in each of the three subjects is similar to that for the Second B.Sc. in Pure Science, and consists of two parts—a Written Examination extending over not less than three hours, and a Practical Examination with specimens.

(2.) The next Examination will be held in April 1901, at the same time as the Second B.Sc. Examination.

(3.) The Competition is open to all Students of the University, from the second to the sixth year (inclusive) of their attendance.

1898. *Campbell Brown, M.A., B.Sc.*

VIII.—ENGINEERING AND MECHANICAL AND USEFUL ARTS.

The Examination is similar to that for the Second B.Sc. in Engineering, with the addition of questions on prescribed books treating of Engineering and Mechanical and useful Arts.

The Competition is open to all Matriculated Students who have been in regular attendance on the Class of Engineering for at least two Winter Sessions, and who have not been Students of the University for more than four years. The next Competition will take place in April 1900.

The Examiners are the Professors of Engineering and Natural Philosophy.

1897. *William Blackadder, B.Sc.*

IX.—STEVEN SCHOLARSHIP IN AGRICULTURE.

This Scholarship was founded in 1882 by the Misses Steven of Bellahouston in memory of their brother Moses Steven, Esq. It is of the value of £70, and is awarded annually, in connection with the Class of Agriculture, the subjects of examination being Agriculture and General and Agricultural Chemistry.

The Scholar is required to visit the annual exhibitions of the four leading agricultural societies, or such as the Professor of Agriculture shall appoint, and to report on his visit or visits to the satisfaction of the Professor of Agriculture. The Exhibitions which the Scholar is required to visit are:—

The Royal Agricultural Society of England.
The Bath and West of England Agricultural Society.
The Highland and Agricultural Society of Scotland.
Royal Agricultural Society of Ireland.

See Deed of Foundation at p. 397 of CALENDAR for 1882-83.

1899. *W. J. M'Gaw.* } equal.
H. C. Sampson. }

X., XI.—HOPE PRIZE SCHOLARSHIPS.

Two Hope Prize Scholarships have been instituted (with funds formerly of the Hope Chemistry Prize founded by the late Professor Thomas C. Hope) in connection with the Chemical Laboratory of the University, each of the value of about £30 per annum, tenable for one year, and awarded annually at the end of the Winter Session. Each Scholarship is awarded to the student whom the Professor of Chemistry thinks most deserving of those who have worked during that Winter Session in the Chemical Laboratory of the University. The scholars must work during the Summer and Winter Sessions succeeding their appointment in the Chemical Laboratory of the University, and must assist the Professor of Chemistry in such manner as he thinks fit in each case, and the scholars are not required to pay fees for the Laboratory. In case of resignation of a scholar, or of a scholar failing to fulfil the conditions, the Professor of Chemistry may, if he thinks proper, recommend a student working in the Chemical Laboratory for the remainder of the Scholarship so become vacant, the new scholar so appointed to perform the duties and receive the payments during the remainder of the time for which his predecessor was appointed. Scholars may, in case of great distinction, be appointed for a second year.

1899. *F. J. Wilson* and *John Webster.*

XII.—NEIL ARNOTT SCHOLARSHIP IN EXPERIMENTAL PHYSICS.[1]

Is awarded annually in April.

XIII.—THE MACKAY SMITH SCHOLARSHIPS.

These Scholarships were at first intended to have been held in Edinburgh and Glasgow Universities alternately, and were so held in Edinburgh for the Sessions 1883-84 and 1884-85, and in Glasgow for the Sessions 1885-86 and 1886-87. It was, however, afterwards arranged, instead of the Scholarships alternating between the two

[1] For particulars, see "Scholarships" in Faculty of Arts.

Universities, that the proceeds of the present investment should be divided—one half being retained by the University of Edinburgh, and the other half transferred to the University of Glasgow, so that each University now acts independently. The portion of the proceeds at present falling to Edinburgh is £50 annually, which provides one Scholarship in Natural Philosophy and one in Chemistry, each of the annual value of £25, tenable for two years, and to be held under such regulations and conditions as the Senatus may from time to time direct. The Scholarship in Natural Philosophy is open for competition to Students who have attended the Class of Natural Philosophy, and the Scholarship in Chemistry to Students who have attended the Class of Chemistry, both in this University. The successful Candidate for the Scholarship in Natural Philosophy is bound to attend the Class of Natural Philosophy, or to prosecute the study thereof, in the University during at least one year of his tenure of the Scholarship, in such way as the Senatus may direct or approve; and the Scholarship in Chemistry is held under similar conditions as regards attendance on the Class of Chemistry, and the prosecution of the study thereof. The next Competition for these Scholarships will take place at the end of Winter Session 1899-1900.

1898. *S. A. Ellerbeck* (Chem.). | *J. T. Young, M.A., B.Sc.* (Nat. Phil.).

XIV.—ROYAL COMMISSION FOR EXHIBITION OF 1851 PHYSICAL SCIENCE SCHOLARSHIP.

The Commissioners for the Exhibition of 1851 give this University the power of nominating a Student to a Scholarship of £150 a-year, tenable for two years, and which may be extended to three years under the following conditions, viz. (*a*) That he is a British subject; (*b*) That he has been a *bona fide* student of Science in this University for three years; (*c*) That he has been for a full year previous to his appointment, and at the date of his appointment is, a student of the University, or has been a student of the University for a full year ending within twelve months prior to the date of his appointment, and since ceasing to be such student has been engaged solely in scientific study. The Scholarship is limited to those branches of Science (such as Physics, Mechanics, and Chemistry) the extension of which is specially important for the national industries, and may be tenable in any University or other Institution to be approved by the Commissioners. Applications must be made annually not later than the 1st of March. See Regulations, p. 544 of CALENDAR for 1891-92.

1899.

XV., XVI.—THE ARTHUR TREVELYAN SCHOLARSHIPS IN ENGINEERING.

Two Arthur Trevelyan Scholarships in Engineering, of about £15, 12s. per annum, for proficiency in Engineering and the Mechanical and useful Arts, tenable in this University for two years. Candidates must

not be more than nineteen years of age, must have passed the preliminary examination or its equivalent, and must not have attended more than one Winter and one Summer Course in Engineering and field work respectively, either in this University or elsewhere. The subjects of examination are (*a*) Mathematics, as far as the subjects required for the first B.Sc. examination in Engineering ; (*b*) Physics to the same extent ; (*c*) Engineering(the subjects of the previous Winter Session and field work) ; (*d*) geometrical drawing and elementary graphics. See Excerpt from Deed, page 538 of CALENDAR for 1892-93. One Scholarship is awarded annually in March.

1898. Not awarded.

1899. Not awarded.

XVII., XVIII.—MISSES BAXTER OF BALGAVIES SCHOLARSHIPS AND BURSARIES.

Under this Endowment there are two Scholarships, of the annual value of £40, and two Bursaries, of the annual value of £30. They are in the gift of the Directors of the High School of Dundee, and are open for competition to all pupils of that school who shall have finished their course at the time, or within one year previously. The examination is held in Dundee by examiners appointed by the Directors, and the subjects are Geometry, Algebra, Trigonometry, and Mechanical Drawing. The Scholarships are tenable for one year certain, and for a second if a favourable certificate is sent to the Directors by the Senatus Academicus, and the Bursaries for two years. The patrons may extend the tenure of these Scholarships for a further period of one year, provided the holder shall have previously passed the First Examination for the Degree of Bachelor of Science in the Department of Engineering in this University. The Classes to be attended during the first two years are Mathematics, Natural Philosophy (two courses), Engineering (two courses), and Chemistry, and may (by resolution of the Senatus), be attended in any order most convenient to the scholar, provided he intimate his intentions to the Dean of the Faculty of Science beforehand. In the event of a third year's tenure, the Scholar may attend any two classes selected by himself and approved by the Senatus.

These Scholarships are not to be held with any other Scholarship, Fellowship, or appointment yielding £50 per annum. *See* Deeds of Foundation, at page 255 of the CALENDAR for 1869-70, at p. 372 of CALENDAR for 1878-79, and at p. 377 of the CALENDAR for 1881-82.

1896. *David P. Grubb.*

1897. *John M. Newton.*

XIX.—GRAY SCHOLARSHIP FOR RESEARCH.[1]

XX.—THE WILLIAM DICKSON TRAVELLING FUND.[1]

[1] For particulars, see under Faculty of Arts.

XXI.—EARL OF MORAY ENDOWMENT FOR THE PROMOTION OF ORIGINAL RESEARCH.[1]

XXII.—THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is in the patronage of the Trustees of the British Museum, and is of the annual value of £144. The Trustees may appoint any Graduate in any Faculty of the University who has obtained his degree after examination. The office is tenable for five years, at the expiration of which period the Lecturer is ineligible for the next election. The number of lectures is not to be less than twelve in each year, nor more than three in the same week. The course is required to be annually delivered between the first of November and the end of July following, at such public places in the United Kingdom as the Trustees shall approve. The public are admitted without fee. The Lecturer is required at the termination of each course to deposit a copy, or full extract of such course of lectures, with the Principal Librarian of the British Museum, to whom application may be made for further particulars.

Of the foregoing Fellowships, Scholarships, Bursaries, and Prizes, the following are open during 1899-1900.[2]

FELLOWSHIPS.[2]

1-5. *Five George Heriot Fellowships for Research*, No. IV., page 185.

SCHOLARSHIPS.[2]

1. *Royal Commission for Exhibition of* 1851 *Physical Science Scholarship*, No. XIV., page 272.

2. *The Vans Dunlop Scholarship in Chemistry*, No. VI., page 270. The next competition will take place on Monday, 23rd July 1900, at 9 and 1 o'clock. Names of Candidates to be given in, and Certificates shown, not later than 1st July.

3. *The Vans Dunlop Scholarship in Engineering and Mechanical and Useful Arts*, No. VIII., page 270. The Examination is similar to that for the Second B.Sc., with the addition of Questions on one or other of the following groups of books at the option of the Candidate:—(1) Mosley's "Mechanics of Engineering"; Tredgold's "Carpentry" (revised by Tarn). (2) Fairbairn, "Mills and Millwork"; Silvanus Thompson's "Dynamo-Electric Machinery." The Examinations will take place on 3rd April and following days at 9 A.M. Candidates are required to give in their names, with a statement of their University

[1] For particulars, see under Faculty of Arts.

[2] For further information, and for information regarding other Fellowships, Scholarships, Bursaries, and Prizes, see pp. 267-274, where full information regarding the conditions and values, &c., are given. The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise and fall of the rate of interest, &c.

standing, to the Clerk to the Senatus, on or before 15th March 1900, and, at the same time, to state on which of the two foregoing groups of books they elect to be examined.

4, 5. *Two Baxter Scholarships, one in Natural Science and one in Physical Science*, Nos. I. and II., page 268.

6, 7. *Two Hope Prize Scholarships*, Nos. X. and XI., page 271.

8. *Steven Scholarship in Agriculture*, No. IX., page 270. The competition takes place in March. Candidates to enter names *on or before* 15th March.

9. *Neil Arnott Scholarship for Experimental Physics*, No. XII., page 271.

10. *The Mackay Smith Scholarship in Chemistry*, No. XIII., page 271. The Examination will be held on 23rd July 1900, at 10 o'clock A.M. Names of Candidates to be entered at the Matriculation Office on or before 1st July.

11. *The Mackay Smith Scholarship in Natural Philosophy*, No. XIII., page 271. The Examination will take place at the same time as the Examination in Natural Philosophy for the ordinary Degree of M.A. (6th April 1900, from 9-11 and 11.30-1.30. Names to be entered at the Matriculation Office on or before 15th March.

12. *Arthur Trevelyan Scholarship in Engineering*, No. XV., page 272. Names of Candidates to be entered on or before 15th March.

13, 14. *Two Misses Baxter of Balgavies Scholarships*, Nos. XVII. and XVIII., page 273.

Competitors for Fellowships and Scholarships must have studied the subjects of Examination at the University of Edinburgh. No Fellowship or Scholarship can be held along with any other University Fellowship or Scholarship.

FUNDS FOR RESEARCH.

1. *The William Dickson Travelling Fund.* See page 185. Applications to be lodged with the Secretary of Senatus on or before 15th March.

2. *The Earl of Moray Endowment for the Promotion of Original Research.* See page 186.

BURSARIES.[1]

1, 2. *Two Sibbald Bursaries.*[2]

3-9. *Seven Heriot Bursaries.*[2]

10. *The Donald Fraser Bursary.*[2]

11. *Renton Bursary.*[2]

Town Council Bursaries. — Apply to the City Clerk, Council Chambers, Edinburgh.

12-15. *Four Buchanan Bursaries* may be held in the Faculty of Science. See under open Bursaries in the Faculty of Arts.

University Bursaries cannot be held along with any other Bursary.

[1] See footnote 2, page 274.

[2] See under Faculty of Arts.

PRIZES.[1]

1, 2. *Two Newton Bursaries or Prizes.*[2]
3. *The Kelland Memorial Prize.*[2]
4. *The Lord Rector's Prize.*[2]
5, 6, 7. *The Gray Prize Essay*,[2] Nos. VII., VIII., IX.
8. *The Anderson Henry Prize.*[3]

The attention of all Bursars in the Faculty of Science is particularly called to the following regulation :—

Bursars in the Faculty of Science (to whose Bursaries special conditions are not attached) must annually attend at least two of the Classes necessary for the Degree of Bachelor of Science, and must present themselves at the Examinations necessary for that Degree.

Each Bursar must present a Certificate, signed by the Dean, attesting his regular attendance on the proper Classes in the Faculty of Science, on each occasion on which he applies to the Factor for a payment.

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Science*, after 14th November; and at the end of the Session. In applying to the Dean for the Certificate in November, Bursars must present their Class Cards for the Session; and at the end of the Session they must present Certificates from the Professors that they have attended with regularity and made progress in their studies. Payments are made by the University Factor, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 14th November for the Martinmas payments, and on and after 18th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

[1] See footnote 2, page 274.
[2] See under Faculty of Arts.
[3] See under Faculty of Medicine.

JAMES GEIKIE, D.C.L., LL.D., F.R.S., &c.,
Dean of the Faculty of Science.

Programme of Classes.

FACULTY OF DIVINITY.

1899-1900.

Dean—Professor TAYLOR, D.D.

The Classes will be opened as follows, and will close on 16th March 1900.

Classes.	Days of Opening, and Hours of Lectures.	Professors.	Class Fees.[1]
Divinity	24 Oct., 12 o'cl.	Prof. Flint	£3 3
Ecclesiastical History.	24 Oct., 11 ,,	Prof. Taylor	3 3
Biblical Criticism	24 Oct., 10 ,,	Prof. Patrick	3 3
Hebrew—Junior Cl.	24 Oct., 1 ,,		3 3
Senior Cl.	24 Oct., 2 ,,		3 3
Arabic (*Mond., Wed., & Frid.*)	25 Oct., 3 ,,	Prof. Kennedy.	3 3
Syriac (*Tues. & Thurs.*)	24 Oct., 3 ,,		2 2

THE SUMMER PREPARATORY CLASSES IN ELEMENTARY HEBREW AND ELEMENTARY ARABIC, conducted by the Class-Assistant under the superintendence of the Professor, open on 1st May, at 10 A.M. and 11 A.M. Fee for Hebrew, £1, 11s. 6d.; and for Arabic, £2, 2s.

GIFFORD LECTURESHIP, for "promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term." *Lecturer*—Professor WILLIAM JAMES of Harvard University, U.S.A.

The arrangements for next Course will be announced before the beginning of the Session.

GUNNING VICTORIA JUBILEE LECTURES IN NATURAL SCIENCE.

This Course of Three Lectures will be delivered in the Winter Session of 1900-1901.

Lecturer—Rev. JOHN M. ROBERTSON, M.A., St Ninians.

CLASS-ASSISTANTS.

Hebrew and Semitic Languages—ANDREW TWEEDIE, M.A., B.D.
Divinity—ALEXANDER HORN, B.D.

EXAMINERS FOR B.D.

Professor W. B. STEVENSON, B.D.; Rev. A. STUART MARTIN, B.D.

MATRICULATION FEES. See page 27.

[1] For Second and Third Attendances in Divinity, no reduction. Subsequent attendances free. For Second Attendances on Hebrew, Ecclesiastical History, and Biblical Criticism, no reduction. Subsequent attendances free. Fee in case of Licentiates of Foreign and Colonial Churches, £2, 2s.

CURRICULUM FOR THE MINISTRY IN THE CHURCH OF SCOTLAND.

The Laws of the Church of Scotland require that every Theological Student, who desires to qualify himself for the Ministry, should attend the Class of *Divinity*, either during *three full and regular Sessions*, or during *two regular and three partial Sessions*;—and also that he should regularly attend during two Sessions each of the Classes of *Hebrew*, *Ecclesiastical History*, and *Biblical Criticism*.

Entrance Examinations.

(1) Students, before enrolment *for the first year* of their curriculum with a view to the Ministry in the Church of Scotland, must produce to the Professor of Divinity Certificates of their having satisfactorily undergone an Examination in the subjects embraced in the *Curriculum of Arts*, and also in the Elements of Hebrew Grammar. By Act IX. of General Assembly 1872, it is ordained that this Examination shall be conducted at each of the four Scottish Universities, shortly before the commencement of every Session, by four Examining Committees, consisting of members elected by the adjoining Synods, with Conveners nominated by the General Assembly. *The Convener of the Committee for the University of Edinburgh is the Rev. John Alison, D.D., Minister of Newington.* The time of the Committee's meeting and the prescribed subjects of Examination will be timeously advertised in the *Mission Record* of the Church of Scotland.

(2) Students, before enrolment at the beginning of *every Session after the first* of their Course in Divinity, must produce certificates of their having satisfactorily undergone the Examinations prescribed by their respective Presbyteries. For subjects of Examination prescribed by the *Presbytery of Edinburgh*, see *Appendix to Calendar*.

Discourses.

Every Student of Divinity is required during his curriculum to deliver with approbation *six* discourses upon subjects prescribed by the Professor of Divinity, viz., a Homily, a Latin

Thesis, a Lecture, a popular Sermon, a Hebrew Exercise on a passage of the Old Testament, and an Exercise with additions on a passage of the Greek New Testament.

The following Regulations have been made by the Faculty of Theology in regard to the delivery of these Discourses. (1) Students of the *first* year shall give in their *Homily* to the Professor of Divinity not later than 1st February; (2) Students of the *second* year shall give in their *Latin* Thesis not later than the 16th December, and shall be prepared to deliver their *Lecture* not later than the 10th January; (3) Students of the *third* year shall give in their *Hebrew Exercise* and their *Greek Exercise* with additions, not later than the 16th December, and shall be prepared to deliver their *Popular Sermon* not later than the 2nd of February.

Attendance at Foreign Universities.

The General Assembly of 1868, with the consent of a majority of Presbyteries, enacted and ordained:—(1) That all Candidates for the ministry shall attend during at least *two sessions* the Theological Classes at one or more of the Universities of Scotland, and shall deliver, with approbation, the Six Trial Discourses required by the Acts of the General Assembly; and (2) That any Student who wishes to prosecute the remainder of his Theological Curriculum at any Protestant University or Universities not within the bounds of this Church, shall, before repairing thither, undergo satisfactory examination by the Presbytery with which he is connected, and shall, moreover, satisfy the same Presbytery in regard both to the Classes which he proposes to attend, and to the proficiency he has acquired in the language used in the Foreign University in which he intends to study.

Courses in the Faculty of Divinity.

I. DIVINITY.

PROFESSOR FLINT.

The course of study in this class extends over three Sessions. The Subjects of the Lectures during 1899-1900 will be:—1. The

Presuppositions of Christian Dogmatics. 2. The Christian Doctrine of God. 3. Christian Doctrine of the World. 4. Christian Doctrine of Man. 5. Christian Doctrine of Sin.

Lectures will be delivered on Mondays, Tuesdays, Wednesdays, and Thursdays at 12 o'clock. Fridays will be devoted partly to the hearing of Discourses and Exercises, and partly to Lectures. There will be occasional examinations on "Antitheistic Theories."

The work of the class includes two written examinations and an essay.

II. HEBREW AND SEMITIC LANGUAGES.

PROFESSOR KENNEDY.

A.—Hebrew.

Junior Class—1 to 2.

This class is conducted in two divisions, an upper and a lower. The latter is intended for students having no previous acquaintance with Hebrew, the former for those who have advanced as far as § 30 of the text-book. The Lower Junior will meet for the first time on the day appointed for the opening of the Arts classes, and thereafter on five days a week with the Professor or the Assistant. Text-books: Davidson's *Introductory Hebrew Grammar*, and the book of Genesis in Hebrew.

The Upper Junior will meet for the first time on the day appointed for the opening of the Divinity Classes, and thereafter on three days a week with the Professor or the Class-Assistant. On these days the class will continue the study of the Grammar, including parts of the Syntax (Davidson's *Hebrew Syntax*), and read easy prose passages from the Old Testament. On two days a week the two divisions will meet together for the revision of the Grammar, and for practice in translation into Hebrew.

The students' progress is regularly tested by oral and written examinations throughout the Session.

For Preparatory Class of Elementary Hebrew (see page 4).

Senior Class—2 to 3.

Study of Davidson's *Hebrew Syntax*. Hebrew Prose Composition. Reading of unpointed texts (Baer's *Pentateuch*).

Reading and Exposition of portions of the Historical, Poetical, and Prophetical Books of the Old Testament. For Session 1899-1900, Exodus i.-xx. ; Nahum, Habakkuk, Zephania ; Psalms, Book i.

Discussion of *Critical and Historical* Questions connected with the Books read.

Oral and Written Examinations.

The Senior Hebrew Class will be the Graduating Class in Hebrew for the Ordinary Degree of Master of Arts ; and any student who desires to attend this Class with a view to Graduation in Arts must previously pass an examination, in accordance with Sect. IV. subs. 3 of the Regulations.

The examination will include plain passages for translation from and into Hebrew, and grammatical questions.

Those who propose, in a subsequent Session, to take up Hebrew as one of their Graduation Subjects, will have an opportunity of attending the Junior Class in that language during the Session 1899-1900.

B.—Arabic—3 *to* 4.

The course of instruction in Arabic extends over one Summer and two Winter Sessions.

(1) A Preparatory Class for elementary Arabic is conducted during the Summer Session by the Class-Assistant, under the superintendence of the Professor. *Intending students of Arabic are strongly advised to take this Class.* Text-books : Socin's *Arabic Grammar* (New Edition, 1895) and Jacob's Bible Chrestomathy. The fee is £2, 2s.

(2) A Junior Class in continuation of the above, meeting three days a week in *alternate* sessions (next in 1899-1900). Text-books: Socin's *Grammar* and Bruennow's *Chrestomathy of Arabic Prose Pieces* (1895). Elementary Arabic Composition. The fee is £3, 3s.

(3) A Senior Class, meeting ordinarily three days a week in *alternate* sessions (next in 1900-1901), for more advanced reading in prose and poetry, and for the study of Arabic syntax and composition. Text-books (besides those already mentioned) :

The Koran (Fluegel's edition), Nallino's *Chrestomathia Coranica*, Noeldeke and Mueller's *Delectus Veterum Carminum Arabicorum* (1890), Wright's *Arabic Grammar* (3rd edit., 1896). The fee is £3, 3s.

This course has been sanctioned by the University Court as a half-course qualifying for graduation in Arts, and the class will be held in two succesive sessions, if required, to meet the needs of intending graduates. For text-books see under *Graduation in Arts*, p. 129.

C.—SYRIAC—3 *to* 4.

The course of instruction in Syriac extends over two Winter Sessions.

(1) A Junior Class, meeting on two days a week in *alternate* sessions (next in 1901-2), for the study of the grammar and the reading of portions of the Syriac gospels. Text-books: Nestle's *Syriac Grammar* (1889), Syriac New Testament (Peshittâ).

(2) A Senior Class, meeting on two days a week in *alternate* sessions (next in 1899-1900), for the study of syntax and composition and for more advanced reading in prose and poetry, such as the extracts from Bar-Hebræus and Ephrem Syrus in Roediger's *Chrestomathy* (3rd edit.) and the *Vitæ Prophetarum* in Nestle's *Grammar*.

The fee for each of these classes is £2, 2s.

III. ECCLESIASTICAL HISTORY.

PROFESSOR TAYLOR.

1. *Lectures*—Mondays and Tuesdays.—On The Rise and Diffusion of Protestantism.

2. *Lectures*—Wednesdays and Thursdays.—On the Reformation in Scotland to 1572.

3. *Text-book*—Fridays.—Kurtz's "History of the Christian Church." First Division; Second Section.

The work of the class includes three written examinations.

For the Regulations of the Vans Dunlop Scholarship in "History,"—value about £100 annually for three years,—see in CALENDAR under "SCHOLARSHIPS IN ARTS" and "SCHOLARSHIPS IN DIVINITY."

IV. BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

PROFESSOR PATRICK.

It is intended to occupy next Session, with (1) Lectures on Introduction to the Catholic Epistles. (2) Exegetical and Critical Lectures on the *New Testament*. (3) Reading of the N. T. in Greek.

There will be written and oral examinations, in which all regular students are required to take part ; and subjects of occasional voluntary essays may be suggested.

LECTURESHIPS.

I.—GIFFORD LECTURES ON NATURAL THEOLOGY.

Lecturer—Professor WILLIAM JAMES of Harvard University.

These Lectures were endowed by the late Adam Gifford, Senator of the College of Justice, "for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term."

According to the Trust Deed, "the lecturers appointed shall be subjected to no test of any kind, and shall not be required to take any oath, or to emit or subscribe any declaration of belief, or to make any promise of any kind ; they may be of any denomination whatever, or of no denomination at all ; they may be of any religion or way of thinking, or, as is sometimes said, they may be of no religion ; or they may be so-called sceptics or agnostics or free-thinkers ;—provided only that the 'patrons' will use diligence to secure that they be able reverent men, true thinkers, sincere lovers of and earnest inquirers after truth. I wish the lecturers to treat their subjects as a strictly natural science, the greatest of all possible sciences, indeed, in one sense, the only science,– that of Infinite Being, without reference to or reliance upon any supposed special exceptional or so-called miraculous revelation. The lecturers shall be under no restraint whatever in their treatment of their theme. The lectures shall be public and popular, that is, open not only to

students of the Universities, but to the whole community, without matriculation."

II.—THE GUNNING VICTORIA JUBILEE LECTURESHIP.

Lecturer—Rev. JOHN M. ROBERTSON, St Ninians.

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded a Lectureship in the Faculty of Divinity of the University of Edinburgh, to be known as "The Gunning Victoria Jubilee Lectureship."

The Gunning Lectureship is a triennial appointment of the value of £100, and the appointment shall be made by the Faculty of Divinity. The lecturer may be any Scottish Presbyterian clergyman at home, or in the Mission field, eminent in Science, Philosophy, Language, Antiquity, or Sociology, and the lectures may be delivered in the University of Edinburgh, or such other place as the Faculty may appoint.

See Revised Scheme, p. 519 of CALENDAR 1889-90.

Graduation in Divinity.

REGULATIONS FOR GRADUATION IN DIVINITY.

(Candidates who began the study of Divinity with a view to Graduation before 1st October 1896 are referred to the CALENDAR *for 1896-97 and to previous* CALENDARS.)

I. No one is admitted to examination as a Candidate for the Degree of Bachelor of Divinity (B.D.) unless he be (1) a Graduate in Arts of the University, and have taken a complete Theological Course in a Scottish University or Universities, or in an institution or institutions specially recognised for the purpose by the University Court, or partly in a Scottish University or Universities and partly in such institution or institutions; or (2) a Graduate in Arts of any Scottish University or other University specially recognised as aforesaid,[1] and has completed

[1] Degree of B.A. of Manitoba University recognised as qualifying for Graduation in Divinity.

his Theological Course, of which not less than two years' attendance has been given in this University.

II. The Examiners are the Professors of the subjects included in the examinations, and two additional Examiners appointed by the University Court. The mode of conducting the examination is fixed from time to time by the Senatus Academicus.

By a Supplementary Ordinance it is provided that, notwithstanding the provisions of Section I. hereof, the Senatus Academicus may, under this Section, admit candidates to examination in not more than three of the subjects, after the completion of the second session of attendance on their Theological Course.

III. The subjects of examination are arranged in two departments: —The First Department embracing—(1) Hebrew, and (2) Apologetic Theology, or the Evidences of Natural and Revealed Religion; and the Second Department embracing—(1) Ecclesiastical History, (2) Systematic Theology, and (3) Biblical Criticism and Biblical Antiquities.

IV. Every Student who at the time when these Regulations came into operation had completed a part of his Theological Course with a view to Graduation as B.D., under Regulations hitherto in force, and shall thereafter complete his course of study in conformity with such Regulations, may become a Candidate for the Degree of B.D. without complying with the provisions of these Regulations.

V. The Degree of B.D. is in no case conferred on persons who have not complied with the conditions hereinbefore set forth, and is not conferred *honoris causâ tantum.*

Candidates are required to communicate their names, together with evidence of their being qualified in terms of the above Regulations, to the Dean of the Faculty of Divinity, at least one week before the first day of the Examination.

The subjects of examination for 1899-1900 are as follows:—

DEPARTMENT I.

I. *Hebrew*—

A.—*For October* 1899.

(1.) Questions in Grammar.
(2.) Translation into Hebrew Prose.
(3.) Joel, Amos.
(4.) Psalms, Book v. (Psalms cvii. ff.).
(5.) Judges i.-xviii. (the unpointed text).

B.—*For April and October* 1900.

(1 and 2.) As above.
(3.) Nahum, Habakkuk, Zephaniah.
(4.) Psalms, Book i.
(5.) Exodus i.-xx. (the unpointed text).

Candidates will be expected to show some knowledge of the history from the call of Isaiah to beginning of the Exile, and of the textual and historical criticism of the books prescribed.

II. *Apologetic Theology*—

For October 1899 *and April* 1900.

(1.) The Relations of Philosophy and the Positive Sciences to Theology.

(2.) Christianity and Morality.

(3.) Christianity compared with the Ethnic Religions.

DEPARTMENT II.

For October 1899 *and April* 1900.

I. *Ecclesiastical History*—

(1.) The Main Facts in the Development of the Constitution, Doctrine, and Worship of the Church from 100 to 451 A.D. (2.) The History of the Church in Scotland during the 16th Century.

II. *Systematic Theology*—

(1.) The History of Christian Dogmatics since the Reformation, and especially during the past century.

(2.) Christology.

(3.) Doctrine of the Church and Sacraments.

III. *Biblical Criticism and Biblical Antiquities*—

(1.) Textual Criticism of the New Testament (including knowledge of the Manuscripts, Versions, and Critical Editions).

(2.) History of the Canon of the New Testament to the middle of the 3rd century.

(3.) Introduction to the (1) Pauline and (2) the Catholic Epistles.

(4.) Greek New Testament. The Gospel of St Mark and the Epistle to the Hebrews (with Introduction and Exegesis).

FEES.

Fee for Degree of B.D., . . .	£5 5
When the Examination is taken at two periods—	
The Fee for the First is . . .	3 3
For the Second, ...	2 2

Any Candidate who fails to pass pays a fee of 10s. 6d. for re-examination in each subject.

TIME-TABLE AND DATES OF ENTERING FOR EXAMINATIONS, 1899-1900.[1]

Candidates are required to enter for each periodical Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.

1899.

Oct. 10. Tu. Names to be entered and fees paid *on or before* this date.[1]

[1] When names are not entered, and fees paid, on or before the stated dates, an additional or late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. A Candidate is not held to be entered for the Examination until his name is entered, the fee paid, and all the necessary certificates, &c., lodged.

1899.

Oct.	17.	Tu.	Hebrew, 10 a.m. ; Apologetics, 2 p.m.
,,	18.	Wed.	Ecclesiastical History, 10 a.m. ; Divinity, 2 p.m.
,,	19.	Th.	Biblical Criticism, 10 a.m.

1900.

Mar.	20.	Tu.	Names to be entered and fees paid *on or before* this date.[1]
,,	27.	Tu.	Hebrew, 10 a.m. ; Apologetics, 2 p.m.
,,	28.	Wed.	Ecclesiastical History, 10 a.m. ; Divinity, 2 p.m.
,,	29.	Th.	Biblical Criticism, 10 a.m.

Every Candidate for Examination or for Graduation must matriculate for the Academic year in which he appears for examination or for Graduation, and pay the Fee of £1 for Registration as a Member of the General Council (if not already a Member) *at least one clear day before the date of Graduation.*

The fees for Matriculation, for Examinations for Degrees, and for Registration of Graduates as Members of the General Council are payable at the Matriculation Office, University. When Candidates cannot attend personally to pay the fees, they should transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed "*Union Bank of Scotland* (*Hunter Square Branch*), *Edinburgh*," but not by cheques on private accounts.

THE DEGREE OF BACHELOR OF DIVINITY.

14th April 1899.

Archibald Alexander, M.A.
James Golder Burns, M.A.
John Chalmers, M.A.
George M'Dougall, M.A.
Andrew Murray M'Gregor, M.A.
Charles Gordon Mackenzie, M.A.
Frank Hale Martin, B.A.
James Mathers, B.A.
Gavin Millar, M.A.
Alexander William Mitchell, M.A.
James Bonnar Russell, M.A.
Andrew Tweedie, M.A.
Robert Whyte, M.A.

DEGREE OF DOCTOR OF DIVINITY (D.D.).[2]

The Degree of Doctor of Divinity is conferred *honoris causâ tantum*, —and is granted in absence in special cases only. The Register of Doctors of Divinity begins in 1709, with the names of Edmund Calamy, Daniel Williams, and Joshua Oldfield. The names of Evans, Harris, and Isaac Watts follow in 1728. The Register now includes above 300 names.

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[1] See footnote, p. 286.

[2] Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent ceremonial, on giving at least a week's notice.

The following is a list of those who have received the Degree of Doctor of Divinity in the years 1889-99 inclusively[1] :—

1889.

*Griffith John.
*Professor Abraham Kuenen.
Archibald Henry Sayce, M.A.
Norman M. L. Walker.

1890.

David Douglas Bannerman.
R. H. Lundie, M.A.
Canon J. H. Overton.

1891.

Richard Glover.
Robert Hutton, M.A.
*John Gibson Paton.
D. W. Simon, M.A., Ph.D.

1892.

William Balfour.
Cornelius Giffen.
Newham Hall.

1893.

Thomas Nicol, B.D.
Thomas B. W. Niven.
George Adam Smith.
James Wells, M.A.

1894.

William Hastie, M.A., B.D.
J. A. M'Clymont, M.A., B.D.
J. C. M'Phail.
William Muirhead.

1895.

Robert G. Balfour.
*Alexander Marshall, M.A.
Charles Moinet, M.A.
John Patrick, M.A., B.D.
J. Guinness Rogers, B.A.
*David Sidey.

1896.

Charles Gore, M.A.
William Miller, C.I.E., LL.D.
David Clement Scott, M.A., B.D.
Alexander Williamson.

1897.

H. M. Gwatkin, M.A.
J. B. Hastings, M.A.
W. P. Paterson, M.A., B.D.
R. J. Sandeman.

1898.

George Macalister, M.A.
M. Henri Bois.
Alexander Martin, M.A.
Peter Thomson, M.A., B.D.

14th April 1899.

Rev. Malcolm MacColl, M.A., Canon Residentiary of Ripon, and Rector of St George's, City, London.
Rev. David Somerville, M.A., Roseburn Free Church, Edinburgh.

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[1] The names of those who received the Degree, prior to 1859, will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University, since its foundation," published in 1858, and the names of those who received the Degree from 1859 to 1888, both years included, will be found in the List of Graduates, published in 1889. * Conferred *in absentia.*

Bursaries, Scholarships, Fellowships, &c.

I.—BURSARIES.

See note under Bursaries, page 155.

A.—Presentation Bursaries.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	Years.	Annual Allowance to each Bursar.	Patrons.
I.	1703	Agnes Nairne.	£3 0 0	1	1	..	Senatus Academicus.
II.	1715 1764	Sir James M'Lurg of Vogrie, sometime Dean of Guild of Edinburgh; and Rev. John Penman, Minister of Bothkennar.	20 6 8	1	4	£20 6 8	Capt. R. G. G. Gilmour of Craigmillar, 1st and 3rd Presentations. The Dean of Guild of Edinburgh, 2nd Presentation. Heirs of William Brown, surgeon, 4th Presentation.
III.	1766	Rev. Robert Alexander, Minister of Girvan.	About 19 0 0	1		About 19 0 0	Kirk-Session of Girvan and Presbytery of Ayr.
IV.	1838	Robert Blair, D.D., Barton St Andrews, Norfolk	16 0 0	1		16 0 0	Governors of George Heriot's Trust.
V.	1838	Do. Do	About 23 0 0	1	4	About 23 0 0	The Principal, and Profs. of Hebrew, Divinity, Church History.

I. In abeyance at present.

II. The *M'Lurg and Penman Bursary* is tenable for four years at the Theological Classes. No person shall be presented to the Bursary who is not a Master of Arts of a Scottish University.

III. This Bursary consists of the interest of £420, lent on heritable security, and of £75, 17s. of accumulated interest. It must be held by a Student from the parish of Girvan, presented by the Session; whom failing, by one within the Presbytery of Ayr, to be appointed by the Presbytery.

IV. The *Blair Bursary* can be held only by a young man who has been educated in George Heriot's Hospital School, and has become a Student of Divinity in the University of Edinburgh.

V. To be applied for the benefit of a Student of Divinity, whether a graduate or not. *Bursar*—1898, *Alexander Barrie Robb.*

B.—Competition Bursaries.[1]

See note under Bursaries, page 155.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1646	Buchanan of that Ilk.	£22 16 8	1	3	£22 16 8	Town Council.
II	1666	William Struthers &	} 23 7 0	1	3	23 7 0	Do.
	1693	Archbishop Leighton.					
III.	1687	Andrew Ramsay and Sir Andw. Ramsay of Abbotshall.	16 13 4	1	3	16 13 4	Do.
IV.	1695	King William III.	50 0 0	2	2	25 0 0	Senatus Academicus.
V.	1867	Miss Mary Ettles of Inverness.	98 10 0	3	3	About 32 16 8	Senatus.
VI.	1873	Grierson of Ogscastle's Trustees.	80 0 0	3	1	26 13 4	Senatus.
VII.	1876	Mrs Isabella Webster.	123 0 0	(2	3	About 46 2 6	} Senatus.
				(1	3	30 15 0	}
VIII.	1877	Dr Andrew Thomson	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.
IX.	1879	Mrs Barbara Mylne.	30 0 0	1	3	30 0 0	Moderator, Procurator, and Principal Clerk of General Assembly.
X.	1838	J. Stewart Hepburn of Colquhalzie, Esq.	13 2 6	1	3	13 2 6	Committee of the Presbytery of Edin.
XI.	1858	Do. Do.	13 2 6	1	3	13 2 6	Do.
XII.	1864	Do. Do.	13 2 6	1	3	13 2 6	Do.
XIII.	1882	William Renton.	20 0 0	1	3	20 0 0	Profs. of Theology.
XIV.	1884	Robert Hunter.	31 10 0	2	2	About 15 15 0	Principal and Profs.
XV.	1888	James Simson, Edinburgh.	175 0 0	7	3	25 0 0	Presbytery of Edinburgh.
XVI.	1892	Thomas Lockerby, London.	About 32 0 0	1	3	About 32 1 0	Senatus.
XVII.	1856	John Sharp, Esq., Perth.	18 0 0	1	4	18 0 0	The Presbytery of Perth.

I. The Buchanan Bursary is open for competition to all Masters of Arts of any of the Universities of Scotland, or to Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours, and who are entering on their first or second Session in the Faculty of Divinity in the University of Edinburgh. No person is admissible to competition who has for more than one Session been a Student in the Faculty of Divinity in any of the Scottish Universities. The Bursar holds the Bursary for three years, subject to this condition, that he shall, during that period, give regular attendance, as a Student of Theology, in the University. If it appears to the Senatus Academicus desirable, for the purpose of distributing the benefits of competitive Bursaries in Theology among Students of different years, it is lawful, for that purpose only, to appoint a Student for a shorter period. No person can hold the

[1] The values of these Bursaries are subject to deduction of the fees paid to the Examiners.

Bursary along with any other Bursary, Fellowship, or Scholarship in any Scottish University. *Bursar*—1896, *William Marshall Low, M.A.*

II. The Struthers and Leighton Bursary is open by competition to all Students who are Masters of Arts, or who have passed all the examinations necessary for admitting them to the degree of Master of Arts, and who are entering on their first session of attendance in the Faculty of Divinity in the said University. *Bursar*—1897, *James Black, M.A.*

III. By Ordinance, No. 81, of the Univ. Com., and subsequent Order in Council, the regulations for this Bursary are the same as those for the Buchanan Bursary. *Bursar*—1898, *G. H. Donald.*

IV. By Ordinance, No. 76, of the Universities' Commissioners, and subsequent Order in Council, each King William Bursary is open to competition to all Masters of Arts of any of the Universities of Scotland, or Students who have passed the necessary examinations for the Degree of M.A., and who have attended for one Session, and no more, in the Faculty of Divinity in the University of Edinburgh: Provided that no person shall be a competitor who has attended for one or more Sessions in the Faculty of Divinity in any other of the Scottish Universities. The examinations in the competition shall be conducted by the Professors in the Faculty of Divinity in the University. Each Bursar shall hold his Bursary for two years, subject to the condition that he shall, during that period, give regular attendance as a Student of Theology in the University. No person shall hold either of the Bursaries along with any other Bursary, Fellowship, or Scholarship of any Scottish University. When the two Bursaries fall vacant at one time, one Bursar shall be appointed for two years, and the other for one year. *Bursar*—1899, *David Nelson, MA.*

V. Founded in memory of her brother, J. Ettles, Esq., of Havannah. Open to those who have passed all the examinations for M.A., and are in the first year of their theological course. Cannot be held with any other Bursaries or Scholarships. *See* Deed of Foundation in CALENDAR for 1867-68. *Bursars*—1896, *John Chalmers, M.A.*: 1897, *Richard Bell, M.A.*: 1898, *C. S. Mackenzie, M.A.*

VI. As in the case of the Faculty of Arts (see No. XLVII.), a student from the parishes of Crawford or Leadhills, is, if found duly qualified in respect of attainments, appointed to a Bursary in his first year, and holds it (unless he has failed to show himself a diligent student) to the end of his Theological curriculum. Failing any student from those favoured parishes, the Bursary or Bursaries will be thrown open to competition, but the winner only holds his Bursary for one year in each case. In the second and third years a student from Crawford or Leadhills has again a preference, but holds the Bursary for one year only. Preferential candidates to lodge their applications with the *Clerk of Senatus* on or before 1st November. *See* p. 372 of CALENDAR, 1877-78. *Bursars*, 1898—First year, *John Weir, M.A.*; Second year, *Donald Lamont.*

VII. Founded by Mrs Isabella Webster, 38 Heriot Row, Edinburgh, in

memory of her husband, George Webster, Esq. There are three Bursaries,—two of about £43 each, and one of £37, 10s., open to Students of Divinity in connection with the Church of Scotland in their first year, who have successfully passed all their Examinations for the degree of M.A. in any Scottish University, whether they have actually graduated or not. Each is tenable for three years. *See* Deed of Foundation in CALENDAR for 1878-79, p. 377. *Bursar*—1896, *G. D. Shepherd, M.A.*; 1897, *John Dickie, M.A.*; 1898, *William A. Curtis, M.A.*

VIII. *Preferential Candidates* for the Thomson Bursaries must apply to Messrs Traquair, Dickson & Maclaren, 11 Hill Street. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries, or of the city of Edinburgh, preferred. The subjects of Examination are Latin and Classical Greek, Mathematics and Natural Philosophy, Mental Philosophy (including Logic) and Moral Philosophy and Elementary Hebrew, Apologetics, and Greek Testament. *See* p. 374 of CALENDAR for 1880-81. *Bursars*—1896, *Alex. R. Yeoman, M.A.*; 1898, *James Kirk, M.A.*

IX. *Mylne Bursary.*—Founded by Mrs Barbara Macaulay or Mylne, in memory of her husband, the Rev. Andrew Mylne, minister of the parish of Dollar. The Bursary (being the free proceeds of £750) which is for behoof of Students for the ministry of the Church of Scotland, of Scottish birth, tenable during the curriculum in Divinity, is awarded at the end of the session, after examination (of first year's students) on the subjects taught in the Theological Classes during the session. No one may become a Candidate who has not given his whole time to study during the session preceding the date of Examination, nor may the holder engage in paid work during any session in which he holds the Bursary. It cannot be held along with any other Bursary, Scholarship, or Endowment. *See* Deed of Foundation at page 377 of CALENDAR for 1880-81—1899, *D. A. Morrison.*

X., XI., and XII. The sums attached to these Bursaries are payable to Divinity Students of the Church of Scotland of the first or second year towards the expense of their education at the University of Edinburgh. Each is tenable for three years. For one bursary Gaelic-speaking students have a preference.

XIII. Founded by the late William Renton, of 20 Royal Terrace, Edinburgh. The Faculty of Theology are the Patrons and Trustees. The Bursary may be held for three years, if the Bursar continues so long to prosecute his studies in Theology at the University of Edinburgh, with a view to the ministry in the Church of Scotland, and if not, then for the whole period he continues at the same. The student presented must have attained the age of sixteen, and not exceed the age of twenty-one years, and must be appointed after an examination in the month of November on such subjects as the Professors of the Faculty of Theology consider proper. *Bursar*—1897, *L. M'Glashan, M.A.*

XIV. Founded by the late Robert Hunter, Dalhousie, Chesters; the Principal and Professors being Patrons. These Bursaries are for the benefit of Students of the Church of Scotland, and are awarded at close of first Session in Divinity, and are tenable for two years. Bursars must attend two Sessions in Chemistry and Geology, taking at least one of these Classes each Session. Students of the name of Hunter and Hamilton from the parishes of Temple or Cockpen have

a preference, but preferential Candidates must attain to a fixed percentage. Bursars must produce certificates of diligence in the Classes of Chemistry and Geology. See excerpt from Deed of Foundation, page 437 of CALENDAR for 1885-86. Vacant.

XV. These Bursaries are open to Students who are entering on their first Session in Divinity, and are tenable for three years. For further details and subjects of examination (which differ somewhat from the University Examination for first year's Bursaries), apply to the Rev. G. T. Jamieson, Clerk to the Presbytery of Edinburgh, The Manse, Portobello. *Bursars*—1896, *Gavin Millar; J. L. Buchanan.* 1897, *John Dickie, M.A.; A. J. Campbell, B.A.* 1898, *William A. Dunnett, M.A.; William Murdie, M.A.*

XVI. Founded by the late Thomas Lockerby, Esq., London. The Bursary is tenable for three years, and is open to "Students who desire to become ministers of the Church of Scotland only." *See* Excerpt from Disposition, page 545 of CALENDAR for 1890-91. *Bursar*—1898, *A. Scott Ballantyne.*

XVII. *Sharp Bursary.*—This Bursary is of the annual value of £18, tenable for four years. The Bursar must be a Student of Divinity of the Church of Scotland, and may prosecute his studies at any one of the Scottish Universities. Preference to any student being a native of or subject to the jurisdiction of the Presbytery of Perth. Apply to the Clerk to the Presbytery of Perth.

C.—PRESENTATION BURSARIES, open only to Graduates or Students who have passed the necessary Examinations for the Degree of M.A., but have deferred their Graduation with a view to Honours.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1695	Robert Bayne of Pitcairley.	£25 0 0	1	3	£25 0 0	Society of Sons of the Clergy.
II.	1695	James Nairne.	16 13 4	1	3	16 13 4	Prof. of Divinity.

I. By Ordinance, No. 71, of the Universities' Commissioners, and subsequent Order in Council, the following are the regulations as to this Bursary:—Each Bursar shall hold the Bursary for three years, subject to the condition that he shall, during that period, give regular attendance as a Student in Theology in the University of Edinburgh. No person shall hold the Bursary along with any other Bursary, or with any Scholarship in the University. *Bursar*

II. This Bursary is tenable for three years, or for such period as the Bursar shall give regular attendance as a Student of Theology in the University of Edinburgh. *See* Ordinance, No. 67, of the Universities' Commissioners, and subsequent Order in Council. *Bursar*—1898, *Brice M'Ewen, M.A.*

D. BURSARIES gained in Faculty of Arts, the holders of which are at liberty to study in the Faculty of Divinity.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1[illegible]	Dr Donald Grant, London.	£150 0 0 About	4	4	£15 0 0 About	Dr Grant's Trustees.
II.	1846	John Jamieson, Edinburgh.	26 0 0 About	1	4	26 0 0 About	Principal and two Professors.
III.	1871	The Sibbald Trustees.	150 0 0	5	3	30 0 0	The Trustees of Dr J. R. Sibbald.
V.	1889	Daniel Maclaurin, London.	62 10 0	1	4	62 10 0	Town Council.

I. *See* under Faculty of Arts.
II. *See* under Faculty of Arts.
III. *See* under Bursaries in Arts.
IV. *See* under Faculty of Arts.

II.—PRIZES.

See note under Bursaries, page 155.

I.—BARTY MEMORIAL PRIZE.

The Barty Memorial Prize of £20 for scholarship in Hebrew and Hellenistic Greek is open to entrants to the Divinity Halls of the four Scottish Universities.

II.—HEPBURN PRIZE.

The Hepburn Prize of £25 (which may be divided), open to all Students in actual attendance at the Divinity Hall, may be awarded annually for an essay on a prescribed subject.

III.-XII. THE GUNNING VICTORIA JUBILEE PRIZES.

With a view to promote the study of Natural Science among candidates for the ministry, and to bring out among ministers the fruits of study in Science, Philosophy, Language, Antiquity, and Sociology, Dr R. H. Gunning, of Edinburgh and Rio de Janeiro, has founded ten prizes in the Faculty of Divinity of the University of Edinburgh, to be known as "The Gunning Victoria Jubilee Prizes."

These prizes are ten in number, and comprise a series of five prizes of £50, £40, £30, £20, and £10, for excellence in Theological subjects, and a series of five prizes of similar values for excellence in Natural Science subjects. In their order the prizes in each series correspond in value. A minimum standard of proficiency will be required in each series. The successful competitors may each take both the prize in the Theological, and the prize in the Natural Science series to which their marks may respectively entitle them.

The prizes are competed for triennally at the close of the Divinity Session, and are open to all Students of the Church of Scotland, or other Scottish Churches holding the Confession of Faith, who are gradu-

ates of this University, or have attended two classes in the Faculty of Divinity in this University, and who have completed their Theological curriculum within two years of the close of the session when the competition takes place.

The examination in the Natural Science series will be on Natural History, Botany, and Geology, and of the same standard as the First B.Sc. Examination in Pure Science. The examination in the Theological series will be in Theology proper, the Language and Literature of the Old Testament, Ecclesiastical History, and Biblical Criticism.

The Examiners are the Professors of the subjects of examination in the University of Edinburgh; with the addition of a member of the Senatus of the New College, to be appointed by the Faculty of Divinity. See Revised Scheme, p. 519 of CALENDAR 1889-90.

The next examination under this scheme will be held at the close of Session 1901-1902.

1899. *Theological Series*—1st Prize not awarded.
2nd ,, not awarded.
3rd ,, James Young Simpson, M.A.
4th ,, not awarded.
5th ,, not awarded.

Natural Science Series—1st Prize not awarded.
2nd ,, James Young Simpson, M.A.
3rd ,, not awarded.
4th ,, not awarded.
5th ,, not awarded.

III.—SCHOLARSHIPS.[1]

See note under Bursaries, page 155.

I.—PITT CLUB DIVINITY SCHOLARSHIP.

This Scholarship was instituted in 1862 by the Pitt Club, is of the annual value of £90, 11s. 6d. (under deduction of Examiners' fees), and is tenable for three years. By Ordinance No. 77, of the Universities' Commissioners, this Scholarship is open to competition to all Masters of Arts of any of the Universities of Scotland who have given regular attendance in the Faculty of Divinity in the University of Edin-

[1] It has been agreed by the Senatus and the Faculty of Divinity, in regard to the Fellowships and Scholarships of the funds of which they are severally the administrators, that

1. The *Pitt Theological Scholarship* shall be competed for when it falls vacant.
2. The *Aitken Theological Scholarship* shall be reserved from competition when it falls vacant in the same year with the Pitt.
3. The *Glover Divinity Scholarship* shall (according to its conditions) not be open to competition when the Pitt or Maxton may be open, and shall be similarly reserved when the Aitken is open.
4. That meanwhile the *Maxton* be competed for when it is vacant.

burgh for three complete Sessions, and who are in the course of studying, with the view of becoming Clergymen of the Church of Scotland. No person is admissible who has been entered as a Student of Divinity more than six years prior to the time of the competition.

Candidates are examined on (1) The Evidences of Revealed Religion; (2) Systematic Theology; (3) Hebrew; (4) Church History; (5) Biblical Criticism. It cannot be held with any other Scholarship, Fellowship, or Bursary of any Scottish University, or along with any parochial or pastoral charge, whether as minister or assistant.

1898. *Alexander M. Gordon, M.A.*

II.—MAXTON DIVINITY SCHOLARSHIP.

This Scholarship was founded by the Trustees of the late John Maxton, Esq., in 1867, is of the annual value of £42, 8s. (under deduction of Examiners' fees), and is tenable for three years. It is open only to Students who are members of the Established Church of Scotland, and who have completed the course of study in the Faculty of Divinity in the University of Edinburgh. *See* Deed of Foundation, at p. 234 of CALENDAR for 1867-68.

1899. *Andrew Tweedie, M.A., B.D.*

III.—THE GLOVER DIVINITY SCHOLARSHIP.

This Scholarship was founded in 1875 by Subscribers to a Fund for commemorating the memory of the Rev. W. Glover, D.D., and by the University Endowment Association. It is of the annual value of about £30 (under deduction of Examiners' fees), tenable for three years, and open to all Masters of Arts of any of the Universities of Scotland who have finished their study of Theology, before entering the Church of Scotland, within six years, and who have attended the last Session of their course at least in the University of Edinburgh. It cannot be held with any other Divinity Scholarship or Bursary in any Scottish University, and it is not offered for competition in any year where there is a vacancy in the Pitt Divinity Scholarship or the Maxton Divinity Scholarship. *See* Deed of Foundation, at p. 343 of CALENDAR for 1875-76.

IV.—THE AITKEN THEOLOGICAL SCHOLARSHIP.

This Scholarship, founded in 1875 by bequest of the Rev. David Aitken, D.D., formerly minister of Minto, is of the annual value of £99, 15s. (under deduction of Examiners' fees). Its purpose is to make provision for the study of Church History and Biblical Criticism at one or more University Seats in Germany, or elsewhere on the Continent of Europe, in the case of meritorious students at Edinburgh University. It is to be awarded, after competitive examination (on due proficiency being shewn), to a Student in Divinity of the University of Edinburgh, who is a Graduate in Arts of that University of not more than four years' standing. It is tenable for two years; but the Senatus

may extend the term for another year if it appear to them desirable. The time of the competition to be fixed and publicly intimated by the Senatus at least three months before; and the Senatus are also at liberty to prescribe whether one Semester or two Semesters in the foreign University shall be attended in each year. It is not offered for competition in the same year as the Pitt Divinity Scholarship or the Glover Divinity Scholarship. *See* Deed of Foundation at p. 344 of CALENDAR for 1876-77.

V.—THE DAVID KIDD DIVINITY SCHOLARSHIP.

This Scholarship, which is of the annual value of £36 (under deduction of Examiners' fees), is tenable for three years, and is awarded, after competitive examination in Theology (same as for B.D.), to students of any of the Universities of Scotland who are natives of Scotland, and who have finished their course of study with the view of becoming Ministers of the Church of Scotland. *See* Deed of Foundation in CALENDAR for 1879-80, p. 354.

1898. *Alexander W. Mitchell, M.A.*

VI.—VANS DUNLOP SCHOLARSHIP IN HEBREW AND ORIENTAL (SEMITIC) LANGUAGES.

The Competition is open to all who have been Matriculated Students for not less than two years in this University, and not more than six years altogether in this or any other University; and who have attended at least two courses under the Professor of Hebrew and Oriental Languages. For General Regulations, see under Faculty of Arts.

Candidates will be examined in Hebrew, Syriac, and Arabic.

The Examiners are the Professor of Hebrew and Semitic Languages, and an Examiner appointed by the Senatus. The next Competition will take place at the end of Winter Session 1901-1902.

1899. *Richard Bell, M.A.*

VII.—VANS DUNLOP SCHOLARSHIP IN HISTORY.

(*See Scholarships in Faculty of Arts.*)

VIII.—BRUCE OF GRANGEHILL AND FALKLAND SCHOLARSHIPS.

These Scholarships were founded in 1865 by Mrs Tyndall Bruce of Falkland, and are of the annual value of £100. They come into operation only when a vacancy occurs in any one of the three Scholarships of this name in the Faculty of Arts, by the death, resignation, or dismissal, of a Scholar during the period of his tenure of the Scholarship; and are tenable in this Faculty during the remainder of that

period. They cannot be held with any other Scholarship or Fellowship of a Scottish University, or with any situation yielding an income of £100 a year. The subjects of Examination are prescribed from time to time by the Faculty.

1899. *George Douglas Shepherd, M.A.*

IX. and X.—THE JEFFREY SCHOLARSHIPS.

These Scholarships, two in number, were founded in 1887 by Miss Jane Jeffrey of Victoria Terrace, Portobello. They are each of the annual value of about £67, 10s. under deduction of Examiners' fees), and are tenable for one year. They are awarded annually for special proficiency in the subjects embraced in each of the four departments of Divinity, Hebrew and Semitic Languages, Ecclesiastical History, and Biblical Criticism; and are open to Students of Divinity in connection with the Church of Scotland who shall have given regular attendance for at least one Session on the Divinity Classes in this University, including the class with which the Scholarship competed for is specially connected. They are competed for in the following order:—first year, Divinity, and Hebrew and Oriental Languages; second year, Ecclesiastical History and Biblical Criticism; and so on from year to year. The Examination at the close of Session 1899-1900 is in Ecclesiastical History and Biblical Criticism. *See* Deed at page 497 of CALENDAR for 1888-89.

1899. *Hebrew—A. R. Yeoman, M.A.*
Divinity—John Dickie, M.A.

XI.—COBB SCHOLARSHIP.

This Scholarship, founded in 1889, is a bequest by the late Miss Matilda Johnston Cobb, Broughty Ferry. It is of the annual value of £30 (under deduction of Examiners' fees), and is tenable for three years. The subjects of Examination are Hebrew, Greek, Latin, and Mathematics, and the Scholarship is open to competition amongst Students who are entering on the study of Divinity with a view to becoming Ministers of the Church of Scotland.

1896. *Samuel S. Sanderson, M.A.*

XII. GRAY SCHOLARSHIP FOR RESEARCH.[1]

XIII. THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is open to Graduates in any of the Faculties in the University who have obtained their Degrees after examination. For further particulars, see page 274.

[1] For particulars, see Scholarships in the Faculty of Arts.

SCHOLARSHIPS, BURSARIES, AND UNIVERSITY PRIZES, OPEN FOR COMPETITION IN THE FACULTY OF DIVINITY DURING THE ACADEMIC YEAR COMMENCING 1ST OCTOBER 1899.[1] [2]

I. PRESENTATION BURSARIES.[3]

1. *The M'Lurg and Penman*, No. II., page 289.
2. *The Bayne*, No. I., page 293. May be open.
3. *The James Nairne*, No. II., page 293.

II. COMPETITION SCHOLARSHIPS AND BURSARIES.[3]

The Bursary Examination at the beginning of Session 1899-1900 will be held on Friday, 3rd, and Saturday, 4th November, commencing at 10 A.M. each day, when the following Bursaries will be open for competition :—

1. *The Buchanan Bursary*, No. I., page 290.
2. *The Cobb Scholarship*, No. XI., page 298.
3. *One Webster Bursary*, No. VII., page 291.
4. *One Thomson Bursary*, No. VIII., page 292.
5. *One Ettles Bursary*, No. V., page 291.

The subjects of examination for the above, and for *any other ordinary competition Bursary for first year's Students that may be vacant* at the opening of the Session will be—

(1.) *Latin*—Tacitus' "Germania," and translation from English into Latin prose.
(2.) *Greek*—Euripides' "Alcestis," and Thucydides, Book I.
(3.) *Mathematics*—"Euclid," Books I.-VI.; Algebra and Elementary Trigonometry.
(4.) *Metaphysics*—Ferrier's "Lectures on Greek Philosophy."
(5.) *Moral Philosophy*—Seth's "Study of Ethical Principles."
(6.) *Natural Philosophy*—Blaikie's "Elements of Dynamics," and Balfour Stewart's "Elementary Physics."
(7.) *Hebrew*—Davidson's Grammar and Exercises.
(8.) *Apologetics*—Flint's "Antitheistic Theories."
(9.) *Greek Testament*—Acts, Epistles to Ephesians and Philippians.

6, 7, 8. *Grierson Bursaries*, No. VI., page 291.

The subjects of examination for the Grierson Bursaries, if there be competition, will be :—

For the *first* year—

Same as for ordinary Competition Bursaries, except that *Hebrew*, *Apologetics*, and *Greek Testament* are omitted.

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[1] *Note.*—None of the undernoted Bursaries or Scholarships can be held along with any other Bursary, Fellowship, or Scholarship in any Scottish University. None of the after-mentioned Prizes are subject to this condition.

[2] The values of the Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c. For further information and for information regarding other Scholarships, Bursaries, and Prizes, &c., see CALENDAR.

[3] See Note under Scholarships, page 171.

For the *second* year—

(1.) *Latin*—Lucretius, Book V., and Livy, Book II.

(2.) *Greek Testament*—Gospel of St Matthew and 2 Corinthians.

(3.) *Hebrew*—Grammar; Joshua, chapters i.-x. inclusive; Psalms i.-viii. inclusive; Hebrew Prose Composition.

(4.) *Divinity*—The Doctrine of the Kingdom of God; Doctrine of the Church.

(5.) *Ecclesiastical History*—To 325 A.D.

(6.) *Biblical Criticism*—Introduction to the Synoptic Gospels.

For the *third* year—

(1.) *Apologetic Theology*—Butler's "Analogy."

(2.) *Hebrew*—Class Work of preceding Winter Session.

(3.) *Ecclesiastical History*—To 325 A.D., and of Scotland, 1500 A.D. to 1600 A.D.

(4.) *Biblical Criticism*—The First Epistle to the Corinthians (Introduction and Exegesis).

8, 9. *Two Simson Bursaries*, No. XV., page 293.

10. *A Hepburn Prize*, £25 (which may be divided), for the best Essay on "Miraculous and Non-Miraculous Christianity," to be competed for by Students of second or subsequent year. The Essay not to exceed fifty pages 4to, and to be handed to Rev. Dr Scott, 16 Rothesay Place, Edinburgh, on or before 1st December 1899.

11. *Barty Memorial Prize*, of about £20, for Scholarship in Hebrew and Hellenistic Greek, is open to entrants to the Divinity Halls of the four Scottish Universities. Competitors to apply to J. W. Barty, Esq., Dunblane.

12-14. *Three Hepburn Bursaries* (each about £14), open for competition by all Students of first or second year in Divinity. For one of these, preference given to Gaelic-*speaking* Students. Subjects of Examination: Butler's "Analogy," and Lightfoot's "Epistle to the Galatians," with the Introduction, Notes, and Dissertations. For particulars, apply to the Rev. Dr Scott, minister of St George's, Edinburgh, or Rev. G. T. Jamieson, Clerk to the Presbytery of Edinburgh, The Manse, Portobello.

At the close of Session 1899-1900, the following may be open for competition:—

1. *The Glover Scholarship*, No. III., page 296.

2, 3. *Two Jeffrey Scholarships*, Nos. IX. and X., page 298.

The subjects of Examination are:—

Ecclesiastical History—

1. The Main Facts in the Development of the Constitution, Doctrine, and Worship of the Church from 323 to 451 A.D.
2. The Schism between the Greek and the Roman Church.
3. History of the Church in Scotland from 1560 to 1690.

Biblical Criticism—

1. Introduction to the Catholic Epistles.

2. The Second Epistle to the Corinthians and the Epistle to the Hebrews (Introduction and Exegesis).
3. Westcott's "Introduction to the Study of the Gospels."

4. *One King William Bursary*, No. IV., page 291. The Subjects of examination for this Bursary will be the work of the Session in the Classes of Divinity, Ecclesiastical History, Biblical Criticism, and Junior Hebrew.

5, 6. *Two Robert Hunter Bursaries*, No. XIV., page 292. The subjects of examination are the same as for the King William Bursary. These Bursaries cannot be held along with any other Bursary, Scholarship, or Fellowship in any Scottish University.

III. FUNDS FOR SPECIAL STUDY AND RESEARCH.

1. *William Dickson Travelling Fund* (see page 185).
2. *Earl of Moray Bequest for the Promotion of Original Research*, (see page 186).

IV. PRIZES.[1]

1. The *Lord Rector's Prize*, of twenty-five guineas, for the best Essay on "The mutual influence of England and Scotland upon each other since the Union of the Crowns in 1606." The Prize is open to Students of the University, and to Graduates of not more than two years' standing. Essays to be lodged with the Secretary of Senatus before 1st November, each bearing a motto, and containing the name, address, and University standing of the Candidate.

2. *The Trustees of Gray's Prize Essay Fund* offer three Prizes of £15, £10, and £5 for the first, second, and third best Essays on "The Problem of a Living Wage." No further information will be given. Rev. A. J. Paterson, Duns, Secretary to the Trustees.

The attention of all Bursars in the Faculty of Divinity is particularly called to the following Regulation :—

"Each Bursar must present a Certificate, signed by the Dean, attesting his regular attendance on the proper Classes in the Faculty of Divinity on each occasion on which he applies to the Factor for a payment. Payments are made by the Factor for the University, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 14th November for the Martinmas payments, and on and after 18th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

M. C. TAYLOR, D.D.,
Dean of the Faculty of Divinity.

[1] See Note under Scholarships, page 171.

Faculty of Law.

Dean—Professor Sir LUDOVIC J. GRANT, Bart., B.A.

PROGRAMME OF CLASSES.

WINTER SESSION, 1899-1900.

The Classes in the Faculty of Law will open as follows, and will close on Saturday, 17th March 1900.

Classes.	Days of Opening, and Hours of Lectures.	Professors and Lecturers.	Class Fees.[1]
Public Law[2] (*i.e.*, a half-course in Jurisprudence and a half-course in Public International Law)	17 Oct., 2 o'cl.	Prof. Sir Ludovic J. Grant, Bart.	£4 4[3]
Civil Law[2]	17 Oct., 4 ,,	Prof. Mackintosh	5 5[4]
Scots Law	17 Oct., 9 ,,	Prof. Rankine	5 5[4]
Constitutional Law and History[5]	17 Oct., 5 ,,	Prof. Kirkpatrick.	4 4[3]
Conveyancing	17 Oct., 9 ,,	Prof. Wood	4 4
Political Economy[2]	17 Oct., 5 ,,	Prof. Nicholson	3 3[3]
Do. (Honours Course)[2]	19 Oct., 3 ,,		3 3[3]
Procedure and Evidence[5]	17 Oct., 5.30 ,,	J. J. Cook, LL.B.	2 2

SUMMER SESSION, 1900.

The Classes in the Faculty of Law will open as follows, and will close on Friday, 20th July.

Classes.	Days of Opening, and Hours of Lectures.	Professors and Lecturers.	Class Fees.[1]
Civil Law	14 May, 9 o'clock	Prof. Mackintosh.	£5 5[4]
Scots Law	14 May, 9 ,,	Prof. Rankine	5 5[4]
Forensic Medicine	1 May, 9 ,,	Prof. Sir Henry D. Littlejohn.	4 4
International Private Law[6]	14 May, 5 ,,	N. J. D. Kennedy, M.A.	2 2

[1] Matriculation Fees: Year, £1, 1s.; Summer, 10s. 6d. Second attendances: On £5. 5s. or £4. 4s. Courses, £3. 3s.; on £3. 3s. Courses, £2. 2s. On Half-Courses: First half, no registration; second half, £1, 1s.; on Procedure and Evidence and International Private Law, second attendances, £1, 11s. 6d.; third or subsequent attendances on any Class, £1, 1s.

[2] Qualifying also for the degree of M.A. [3] For a Half-Course, £2, 2s.

[4] This Fee is paid in Winter, and includes the Winter and Summer Sessions. Fee for Winter Session only, £4, 4s.; for Summer Session only, £2, 2s.

[5] Qualifies either as an optional Arts subject, or as "History" as specified in § VII., 2 (*b*) of the Arts Regulations.

[6] Five-shilling University entrance fee for non-matriculated Students.

Courses of Lectures.

1899-1900.

I. CIVIL LAW.

PROFESSOR MACKINTOSH.

The full Course extends over a Winter and a Summer Session, covered by one fee of £5, 5s.

The Winter Course is the same as for Graduation in Arts: see Courses in Arts. The Summer Session is devoted to the doctrines of (1) Wills and Succession, (2) Obligations and Contract. The Contract of Sale will be dealt with in detail.

The Lectures are equally adapted for students qualifying for the legal profession in Scotland or England, or for service in India or the Colonies.

Text-Books.—The Institutes of Gaius and Justinian, and the Professor's "Roman Law of Sale."

The "Muirhead Prize" and the "Forensic Prize" are offered annually for competition.

II. SCOTS LAW.

PROFESSOR RANKINE, LL.D.

Students are recommended to make themselves familiar either with Erskine's "Principles" or his "Institutes" (edition by J. Badenach Nicolson, Esq., 1871). The nineteenth edition of the former work will be the text-book of the Class.

1. Sketch of the Literature of the Law of Scotland—the sources of the Law—the interpretation of Statutes.

2. Personal Relations—marriage and the modes of proving it—patrimonial effects of Marriage—rights of husband and wife—dissolution of Marriage—divorce—tutors and curators—minors—insane—parent and child—succession—heritable and moveable—wills—trusts.

3. Wrongs—personal injury—defamation—ownership of heritable property—rights and liabilities incident thereto—ownership of moveables—copyright—patents.

4. Obligations and Contracts—general requisites, constitu

tion, and construction—partnership—joint-stock companies—factory and agency—sale—letting to hire—leases—carriers—shipping—insurance—bills of exchange—extinction of obligations—diligence—bankruptcy.

5. Parochial Law—burgh and county law—rates and taxes.

6. Criminal Law.

Summer Session.

The Lectures on Criminal Law, and part of the lectures on the above subjects, are delivered during the Summer Session.

III. CONVEYANCING.

PROFESSOR WOOD.

The Course embraces the following subjects :—

BRANCH FIRST—*Deeds in General.*

1. Requisites as to external form, and the solemnities of execution and authentication. 2. Deeds privileged as regards these solemnities. 3. Delivery and acceptance.

BRANCH SECOND—*Deeds relating to Feudal Rights.*

1. The feudal system and its bearing on the existing state of heritable rights in Scotland. 2. The writs constituting a feudal estate. 3. Writs used in the voluntary transmission of lands. 4. Services and Destinations. 5. Settlements and Marriage Contracts, as relating to heritage. 6. Entails.

BRANCH THIRD—*Miscellaneous Rights relating to Heritable Estate.*

1. Servitudes. 2. Leases. 3. Adjudications and Inhibitions. 4. Sequestrations. 5. Trust Deeds for Creditors. 6. Rights in Security.

BRANCH FOURTH—*Miscellaneous Writs, relating mainly to Moveable Rights.*

1. Submissions. 2. Securities over moveables. 3. Cautioner's Writs. 4. Life Insurance Policies Writs. 5. Discharges. 6. Partnership and Company Deeds. 7. Factories. 8. Wills and Marriage Contracts. 9. The Death Duties.

IV. PUBLIC LAW.

PROFESSOR SIR LUDOVIC GRANT, BART.

Two Courses will be delivered during the Session 1899-1900: (1) Forty Lectures on General Jurisprudence (Philosophy of Law); and (2) Forty Lectures on Public International Law.

1. The Course on Jurisprudence will begin on Tuesday, 17th October 1899, at two o'clock.

Books of Reference.—Green, Principles of Political Obligation. Ritchie, Natural Rights. Ahrens, Cours du Droit Naturel. Bluntschli, The Theory of the State. Lorimer, Institutes of Law. The Student's Austin. Holland, Jurisprudence. Markby, Elements of Law. Sir Henry Maine's works. Pollock, History of Political Science, and First Book of Jurisprudence. Clark, Practical Jurisprudence. Dicey, Law of the Constitution. Jenks, Law and Politics in the Middle Ages.

2. The Course on Public International Law will begin on 9th January 1900.

(*a*) An Historical Retrospect. (*b*) Some Account of the Science and Literature of Public International Law. (*c*) An examination of the sources and a critical exposition of the leading doctrines of Public International Law.

Books of Reference.—Ward, Enquiry into the Foundation and History of the Law of Nations. Wheaton, History of the Laws of Nations; Introduction. Nys, Les Origines du Droit International. Westlake, International Law. Phillimore, International Law, Vol. I. Bryce, Holy Roman Empire. Pardessus, Us et Coutumes de la Mer. Hall, International Law. Wheaton, International Law. Lawrence, Principles of International Law. Rivier, Principes du Droit des Geus. Hertslet, Map of Europe by Treaty. Letters by Historicus. Pitt Cobbett, Select Cases. Holland, Studies in International Law.

V. CONSTITUTIONAL LAW AND HISTORY.

PROFESSOR KIRKPATRICK, LL.D.

A full Winter Course, qualifying for Graduation in Law and

in Arts either as an optional Arts subject, or as "History," as specified in section VII., 2 (*b*) of the Arts Regulations), Tuesdays, Wednesdays, Thursdays, and Fridays, at 5. Eight examinations and two essays during the Session. Honours for examinations and essays combined.

Subjects:—(1st Half) Constitutional History and Law of England: (2nd Half) Constitutional History of America, France, Germany, Switzerland, &c.

Text-Books.—(1) For elementary purposes: Taswell Langmead's Constitutional History, and S. R. Gardiner's Student's History of England. For further study, Stubbs's Select Charters and English Constitutional History; Hallam's Middle Ages, Chap. viii.; Hallam's Constitutional History of England; Sir T. Erskine May's Constitutional History; English Constitution by W. Bagehot; Guizot's Lectures on Representative Government; R. Gneist's Self-Government in England, 3d edition, Berlin, 1871; Gneist's Geschichte und heutige Gestalt der Aemter, etc., in England, 2d edition, Berlin, 1866; Gneist's English Constitution, translated by P. A. Ashworth, London, 1886; and Blackstone's Commentaries, Book IV., of Public Rights.

(2) Elementary: Thwaites' The Colonies, and Hart's Formation of the Union (Epochs of American History), Johnston's History of the United States, Macy's Our Government. For further study, Bryce's American Commonwealth, Bancroft's History of the Constitution of the U.S.A., Winsor's History of the U.S.A., Adams and Cunningham's Swiss Confederation, Dareste's or Demombynes' Constitutions, Boutmy's Studies in Constitutional Law, Borgeaud's Adoption and Amendment of Constitutions, A. Lawrence Lowell on Governments and Parties in Europe," &c.

The History Reading-Room (adjoining the Lecture Room) is open to all members of the Class on Mondays and Fridays, from 11 to 1, and on Wednesdays, 12 to 2.

Twenty Lectures on "The English Kingship," by Mr D. P. Heatley, the University Assistant in History, on Wednesdays at 11 (free to all members of the Class).

VI. FORENSIC MEDICINE.

PROFESSOR SIR HENRY D. LITTLEJOHN, M.D., LL.D.

For Synopsis of this Course, *see* under Faculty of Medicine.

VII. COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

For Synopsis of this Course, *see* under Faculty of Arts.

VIII. INTERNATIONAL PRIVATE LAW.

Lecturer—N. J. D. KENNEDY, M.A.

A Course of Forty Lectures on this subject will be given during the Summer Session on Tuesday, Wednesday, Thursday, and Friday in each week, at 5 P.M. Under Ordinances 39 and 40, attendance on these Lectures qualifies as a half-course for Graduation in Law. The subject is also included among those in which Intrants to the Faculty of Advocates may be examined, and the Lectures are therefore adapted for students qualifying for the Scottish Bar.

The Lectures will deal with (*a*) The nature and scope of International Private Law; (*b*) Its History and Literature; (*c*) Its general principles and their application in regard to—i. *Forum*, or Competency, including Jurisdiction, the Recognition of Foreign Judgments, and Procedure generally; and ii. *Lex*, or Choice of Law, in questions of (1) the Personal Law, including *status*, and the family relations; (2) the Law of Property, moveable and immoveable; (3) the Law of Obligations, including contract and delict; (4) Succession; and (5) Bankruptcy.

Examinations will be held on the subjects of the Lectures.

Students are recommended to attend the Class of Scots Law before attending this Course.

Books of Reference.—Guthrie's Savigny; Westlake's Private International Law; Gillespie's Bar; Foote on Private International Jurisprudence; and Dicey's Digest of the Law of England with reference to the Conflict of Laws.

PROCEDURE AND EVIDENCE.

Lecturer—J. J. COOK, LL.B.

This Course of Forty Lectures will describe the various Courts of Scotland, with the nature of their jurisdiction, the actions competent in each, and the details of the procedure followed in them. It will also include the principles of the Law of Evidence. The Lectures are delivered on Tuesday and Thursday of each week during the Winter Session.

Text-Books.—Mackay's "Manual" and "Practice of the Court of Session"; Coldstream's "Procedure in the Court of Session"; Dove Wilson's "Sheriff-Court Practice in Civil Causes"; Macdonald's "Criminal Law"; Macdonald's "Criminal Procedure (Scotland) Act, 1887"; Dickson on "Evidence"; Kirkpatrick on "Evidence."

Candidates for Graduation who pass in Procedure and Evidence as an extra subject may have this fact recorded on their Diplomas.

Regulations for Graduation in Law.

For Regulations for those who began the Study of Law, with a view to Graduation, before 1st October 1895, *see* CALENDAR *for* 1896-97 *or previous* CALENDARS.

Two Degrees in Law are conferred on Examination, viz., Bachelor of Law (B.L.) and Bachelor of Laws (LL.B.). Either Degree admits to the profession of Law Agent, provided the Candidate has included Scots Law and Conveyancing among his Graduation subjects, and has passed an Examination in the Practice of the Courts under the Law Agents Act.

The Degree of LL.B. (if the Candidate has been examined in Civil Law, Philosophy of Law, International Law—Public or Private, Constitutional Law and History, Medical Jurisprudence, Scots Law—Civil and Criminal, including Procedure, and Conveyancing admits to the profession of Advocate.

Two Law Graduation Examinations are held annually, the first beginning on the 1st Monday in October, and the second on the third Monday in March.

I. REGULATIONS FOR BACHELOR OF LAWS (LL.B.).

I. No one is admitted to examination as a Candidate for the Degree of Bachelor of Laws (LL.B.) unless he be a Graduate in Arts of one of the Universities of the United Kingdom; or of any Foreign

or Colonial University specially recognised for the purpose by the University Court.[1]

II. The course of study in Law for the Degree of Bachelor of Laws includes the following subjects :—[2]

(1) Jurisprudence, General or Comparative, during a course of not less than forty lectures.

(2) The Law of Nations, or Public International Law, during a course of not less than forty lectures.

(3) Civil Law, during a course of not less than eighty lectures.

(4) Law of Scotland, or Law of England, during a course of not less than eighty lectures.

(5) Constitutional Law and History, during a course of not less than eighty lectures.

(6) Conveyancing, during a course of not less than eighty lectures ; or Political Economy, or Mercantile Law, during a course of not less than eighty lectures.

(7) Any two of the following subjects, namely :—International Private Law, Political Economy, Administrative Law, and Forensic Medicine ; in each case during a course of not less than forty lectures.

III. (1) The course of study necessary for the Degree of Bachelor of Laws extends over three academical years, one of which at least must be spent in the University in which the Candidate intends to graduate, the other two may be spent in any other University or School of Law, specially recognised by the University Court.[3]

(2) No Candidate for a Degree is deemed to have attended a class as part of the course of study necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

IV. Candidates must undergo examination in the subjects prescribed in Section II. hereof ; and they must pass at one examination in at least two of these subjects. Before presenting themselves in any subject the Candidates must have attended the requisite course of instruction in such subject. Candidates who have passed an examination for another degree in any of the said prescribed subjects in the same University may be exempted from examination in such subject or subjects, provided that the examiners are satisfied that the previous examination in such subject or subjects has been passed on a sufficiently high standard.

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[1] The following Degrees have been recognised in terms of this Section: B.A. of New Zealand University ; B.A. of Cape of Good Hope University ; B.A. of Dalhousie University, Halifax, Nova Scotia ; Queen's College, Kingston, Canada ; B.A. of the Universities of Calcutta and Madras.

[2] For names of authorised extra-academical lecturers, *see* under Faculty of Medicine.

[3] Recognised in terms of this section : the Universities of Oxford, Cambridge, and Dublin, the Inner and Middle Temples, Lincoln's Inn, and Gray's Inn, and the Madras Law School.

V. Every Candidate for the Degree of Bachelor of Laws is examined both orally and in writing on each of the subjects in the course of study above prescribed, in which he presents himself for examination.

VI. (1) Distinction may be awarded to Candidates who have displayed exceptional merit in their examinations.

(2) For the Degree of Bachelor of Laws a diploma is given, setting forth the subjects in which the Candidate has passed, and the distinction (if any) he has attained.

Candidates for Examination or Graduation must matriculate for the year.

II. BACHELOR OF LAW (B.L.).

I. No one is admitted to examination as a Candidate for the Degree of Bachelor of Law (B.L.) unless he be a Graduate in Arts of one of the Universities of the United Kingdom, or of any Foreign or Colonial University specially recognised for the purpose by the University Court: or until he has passed—*A*. The Preliminary Examination in the Faculty of Arts, or its equivalent, and *B*. An examination in one of the Scottish Universities, to be conducted by the Examiners in Arts, in the following subjects, on the Standard of Examination for the Ordinary Degree of Master of Arts:—

(1) Logic and Psychology; or, in the option of the Candidate, Moral Philosophy. (2) Latin. (3) One additional Arts subject, not being one of those which belong also to the Faculty of Law.

And he must have studied at least one of these subjects in a full course in a Scottish University, or an equivalent course in another University approved by the University Court.

II. The course of study in Law necessary for the Degree of Bachelor of Law must include the following subjects:—

(1) Civil Law, during a course of not less than eighty lectures; or a half-course in Civil Law where in any University a full course is not available; provided that in the latter case, Candidates who are not already graduates in Arts are required to take in addition a course in such subject in Arts as may be sanctioned by the Senatus Academicus, or a half-course in one or other of the following branches of Law: (*a*) Jurisprudence, General or Comparative. (*b*) The Law of Nations, or Public International Law. (*c*) Constitutional Law and History. (*d*) International Private Law. (*e*) Mercantile Law. (*f*) Administrative Law.

(2) Law of Scotland, during a course of not less than eighty lectures.

(3) Conveyancing, during a course of not less than eighty lectures.

(4) Forensic Medicine, during a course of not less than forty meetings of the class; or, in the option of the Candidate, a half-course in one of the branches of Law specified in sub-section 1 of this section, if not already taken.

III. (1) The course of study in Law necessary for the Degree of Bachelor of Law extends over two Academical years.

(2) No Candidate for a Degree is deemed to have attended a class as part of the course of study necessary for that degree who does not

present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

(3) The Candidate may prosecute his studies during the prescribed two years in one Scottish University, or in different Scottish Universities, or in a Scottish University and a University or School of Law specially recognised by the University Court ; but one at least of these years must be spent, and all the examinations in the subjects mentioned in the preceding section must be passed, at the University in which he intends to graduate.

IV. The Candidate for the Degree of Bachelor of Law must undergo examination and pass in the four or more subjects selected by him ; but he may present himself for examination in one subject or group of subjects at a time, provided that he has completed the course of study for such subject or group of subjects, and provided also that in that case a higher standard of proficiency shall be exacted.

V. Every Candidate for the Degree of Bachelor of Law is examined, both orally and in writing, on each of the subjects in the course of study above prescribed, in which he presents himself for examination.

VI. (1) Distinction may be awarded to Candidates who have displayed exceptional merit in their examinations.

(2) For the Degree of Bachelor of Law a diploma is given, setting forth the subjects in which the Candidate has passed, and the distinction (if any) he has attained.

Candidates for Examination or Graduation must matriculate for the year.

EXAMINATIONS.

I. Preliminary Examinations for Bachelor of Law (B.L.).

For outlines of the subjects of the Preliminary Examination (a) *on the Standard of the Preliminary Examination for the Degree of Master of Arts* (*M.A.*), *and* (b) *on the Standard of the Ordinary Degree of M.A., see Regulations for Degrees in Arts*, pp. 121-128, *where the dates of entering for the Examinations and payment of the Fees, and the dates of the Examinations, are given.*

II. Law Examinations (for Degrees of LL.B. and B.L.).

Subjects for October 1899 (*and till further notice*).[1]

In General Jurisprudence the subjects will be *The Philosophy of Law* and *Civil Society*, and *Analytical* and *Historical Jurisprudence*. For books recommended see Synopsis of the Professor's Lectures.

In Public International Law the examination will be in the doctrines of the Law and the historical and scientific questions connected therewith. For books see Synopsis of the Professor's Lectures.

In Civil Law the examination will be on the History of the Law, and on its Principles as explained in the Institutes of Gaius and Justinian. Candidates for LL.B. will also be examined on Books xviii.,

[1] Examination papers will be set in the other subjects prescribed by the Regulations if required.

tit. i. (*De contrahenda emptione*) and xix., tit. i. (*de actionibus empti venditi*) of the Digest. The paper will contain passages for translation into English from the Latin text of the above-mentioned books.

In CONSTITUTIONAL LAW AND HISTORY the subjects will be—(*a*) Constitutional History and Law of England, down to the first Reform Act (Text-books, the works of Stubbs, Hallam, and May); (*b*) Constitutional History of the U.S. of America, of France, Germany, and Switzerland (Text-books, Bancroft, Bryce, Adams and Cunningham, Dareste's or Demombynes' Constitutions). See also Synopsis of the Lectures.

In the LAW OF SCOTLAND the subject will be the Municipal Law, Civil and Criminal. The works of Mr Erskine, Mr G. J. Bell, and Lord Kingsburgh, in the latest editions, are recommended to Candidates.

In CONVEYANCING the subject of examination will be—Heritable Rights (excluding Entails) and Moveable Rights.

In FORENSIC MEDICINE the subjects will be—(1) Various Modes of Death: (2) Abortion; (3) Infanticide; (4) Poisoning with Strychnia; (5) Criminal Responsibility of the Insane.

In POLITICAL ECONOMY Candidates are recommended to read in addition to the books set for the M.A. examination, the Professor's "Principles of Political Economy," Books I.-III.

In INTERNATIONAL PRIVATE LAW Candidates will be examined on the subjects dealt with in the Lectures. See Synopsis of the Lectures, and in Guthrie's Savigny.

PROCEDURE AND EVIDENCE.—Candidates for a Law Degree may be examined in this subject also, and have the fact recorded on their diplomas. Candidates will be examined on the subjects dealt with in the Lectures. Text-books, see Synopsis of Lectures.

FEES.

I. PRELIMINARY EXAMINATION FOR B.L.

1. For each examination on Standard of M.A. Preliminary Examination, ... £0 10 6

2. For each subject on M.A. Standard the same fee as is payable for the corresponding subject for M.A., viz. 15s., or £1, 1s., as the case may be.

II. LAW EXAMINATIONS FOR LL.B. AND B.L.

The fee payable for LL.B. is £6 6 0

or

If the Examination be taken at two or more periods—

For the First, ... £3 3 0

For the Second, ... 3 3 0

The fee payable for B.L. is £5 5 0

or

If the Examination be taken at two or more periods—

For the First, ... £3 3 0

For the Second, ... 2 2 0

Candidates who fail to pass in any of the LL.B. or B.L. subjects pay

a fee of 10s. 6d. for reappearance for Examination in each subject in which they have failed.

Fee for registration as a member of the General Council (if not already registered) £1.

DATES OF EXAMINATIONS, AND FOR GIVING IN NAMES AND PAYMENT OF FEES.[1]

Candidates may pay the fees personally or transmit them to T. GILBERT, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, but not by cheques on private accounts.

II. LAW EXAMINATIONS FOR LL.B. AND B.L.[1]

1899.

October 23, Mon. Names to be given in, certificates shown, and fees paid, *on or before* this date.

,, 30, Mon. Scots Law, 9-1; Constitutional Law and History, 2-4.

,, 31, Tu. Civil Law, 9-1; Constitutional Law and History, 2-4.

Nov. 1, Wed. Conveyancing, 9-1; Medical Jurisprudence, 2-4.

,, 2, Th. General Jurisprudence, 9-11; Public International Law, 11.30-1.30; Political Economy, 2-4.

,, 3, Fri. Political Economy, 9-11; International Private Law, 12-2; Procedure and Evidence, 2.30-4.30.[2]

,, 6, Mon. Oral Examinations begin.

1900.

March 5, Mon. Names to be given in, certificates shown, and fees paid, *on or before* this date.

,, 19, Mon. Scots Law, 9-1; Constitutional Law and History, 2-4.

,, 20, Tu. Civil Law, 9-1; Constitutional Law and History, 2-4.

,, 21, Wed. Conveyancing, 9-1; Medical Jurisprudence, 2-4.

,, 22, Th. General Jurisprudence, 9-11; Public International Law, 11.30-1.30; Political Economy, 2-4.

,, 23, Fri. Political Economy, 9-11; International Private Law, 12-2; Procedure and Evidence, 2.30-4.30.[2]

,, 26, Mon. Oral Examinations begin.

GRADUATION CEREMONIALS.

April 14, Sat. } Names to be entered at least ten days previously.
July 28, Sat. }

[1] When names are not entered, nor fees paid, on or before the stated dates, or a Pass obtained where the fee has been previously paid, a late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination. This fee will not be received after Twelve o'clock of the last day but one preceding the Examination for which the Candidate desires to appear, without the express permission of the Dean of his Faculty and the subsequent sanction of the Senatus. A Candidate must enter his name and pay the Fee, or, when the fee has been previously paid, obtain a Pass, for each periodical Examination at which he desires to appear. A Candidate is not held to be entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

[2] This is not a subject for Graduation in Law, but those who pass in it may have he fact recorded on their Diplomas.

Graduates in Law.[1]

DEGREE OF LL.B., 1889-1899.

1889.

David Anderson, M.A.
Claud Patrick Boswell, M.A.
Archibald Brown Campbell, M.A.
*Andrew Henderson Briggs Constable, M.A.
*Alistair Davidson, M.A.
*Matthew Robin Greenlees, M.A.
James Arthur Hope, M.A.
*William Hunter, M.A.
*Robert Bird Kerr, M.A.
Francis Kinloch, B.A.
*George Fleming Mathers, M.A.
*John Hepburn Millar, M.A.
*Charles David Murray, M.A.
*Coventry Dick Peddie, M.A.
John Ritchie, M.A.
*Hamish Hay Stuart, M.A.
Arthur Moodie Thomas, M.A.
*Alexander Thomson, M.A.

1890.

*Duncan Mearns Abel, M.A.
*James Roberton Christie, M.A., LL.B. (Glasg.).
*William Scott Currie, M.A.
Edmund John Gunn, M.A.
Neil James Kennedy, B.A.
William James Kippen, B.A.
Lawrence M'Laren, M.A.
John Liddell Officer, M.A.
Alexander David Russell, M.A.
*William Thomson, M.A.

1891.

Andrew Brown, M.A.
Charles Walker Bruce, M.A.
Robt. Jeffrey Cunningham, M.A.
James Wright Forbes, M.A.
Henry William Gibson, M.A.
Alexander Gray, M.A.
William Gray, M.A.
*James Mercer Irvine, M.A., B.Sc.
*Erskine Dawson Jamieson, M.A.
*Thomas Johnston, M.A.
Robt. Carmichael Malcolm, M.A.
*Thomas Brash Morison, M.A.
C. Morrison, M.A.
*Andrew Fleming Smith, M.A.
James Robert Earl Monteith Smith, M.A.
Michael Smith, M.A.
*Robert Macaulay Smith, M.A.
Frederick Mills Spankie, M.A.
Alex. Arthur Granger-Stewart, M.A.
*Robert Moir Williamson, M.A.
John Buchanan Young, M.A.

1892.

James Barty, M.A.
William Brown, M.A.
*John Sproat Taylor Cameron, M.A.
*William Chree, M.A.
John Marr Davidson, M.A.
*James Grant, M.A.
Augustus Wallace M'Gregor, M.A.
Thomas John Millar, M.A.
Alexander John Raeburn, M.A

1893.

George Haskell Boyd, M.A.
Thomas Sanderson Hepburn Burns, M.A.
*William Findlay, M.A.
Louis Carr Hallard, M.A.
*William Ingram, M.A., D.Sc.

[1] The names of all the Graduates in Law from the institution of the Degrees to 1889 will be found in the List of Graduates of the University, published in 1889, pp 125-127. See also previous CALENDARS.

* Passed with distinction.

*Robert Munro, M.A.
William Dormond Munro, M.A.
*Alexander Blairford Smith, M.A.
Thomas Callander Wade, M.A.
John Peregrine Robertson White, M.A.

1894.

*Alexander Brown, M.A.
Robert Smith Craig, M.A.
William Graham, M.A.
Ian MacIntyre, M.A.
*James M'Robie, M.A.
David Maxwell, M.A.
George Morton, M.A
John Purves Smith, M.A.
Frederick James Thomson, M.A.
*John Aitken Welsh, M.A.

1895.

*Francis Molison Anderson, M.A
*James Ballantyne, M.A.
John Erskine Dods, M.A.
Alexander James Louttit Laing, M.A.
*Charles Lippe, M.A.
Alexander M'Callum, M.A.
William Dunbar MacDougall, M.A.
William George Manson, M.A.
*John Arthur Thomas Robertson, M.A.
Walter James Robertson, M.A.
James Rose, M.A.
*James Miller Thomson, M.A.
David Milne Watson, M.A.

1896.

*James Adamson, M.A.
Arthur James Alison, M.A.
William Blair, M.A.
*John Aitken Christie, M.A.
James Dunlop, M.A.
*Hugh Archibald Hamilton, M.A.
Robert Macfie, M.A.
Robert Dundonald Melville, M.A.
James Duncan Millar, M.A.
William Mitchell, M.A.

1897.

*Alexander Boyd Barty, M.A.
*John Cowan, M.A.
*Thomas Crow Darling, M.A.
Maxwell Fleming, M.A.
Robert Candlish Henderson, M.A.
*David Nasmyth Clarke Hogg, M.A.
Robert Macgregor Mitchell, M.A.
John Alexander Robson, M.A.
George Crurie Steuart, M.A.

1898.

Bijay Kisor Acharyya, B.A.
*William Burt, M.A.
*Robert Gray, M.A.
Thomas Hart, M.A.
*John Alexander Inglis, B.A.
Henry Lillie, M.A.
Malcolm Nicolson MacInnes, M.A.
John Mackintosh, M.A.
Dugald Maclean, M.A.
John James Maclean, M.A.
William Ogilvy, M.A.
*Subharama Swaminadhan, M.A.

14th April 1899.

*William Keith Aikman, M.A.
*James Bell Ballingall, M.A.
*David Connel, M.A.
*Edward Francis Gibson, M.A.
George Hart, M.A.
Charles Angus Macpherson, M.A.
*David Anderson Miln, M.A.
*David Robertson, M.A.

DEGREE OF B.L.

1889.

*Robert Liddell Cockburn.
John Glover.
William Stowell Haldane.

* Passed with Distinction.

John Lumsden Macpherson, M.A.
John James Waugh.

1890.

Duncan Cameron.
Duncan Archibald Maccoll.
Robert Watson.

1891.

John Scrymgeour Hepburn.
John Nisbet.
William Alexander Stewart.
Thomas Trotter.

1893.

John Romanes.
Thomas Edward Taylor, M.A.

1894.

*Alexander Douglas Donald.
Buckham William Liddell.

1895.

Geo. Ernest Rawson Coldstream.
William Alexander Cullen.

1896.

James Dan Easson.
*Alexander Speeden Riach.
David Ritchie.
*William Gowan Dobie Simpson.

1897.

Alexander Ernest Philip Gardner.

1898.

James Kidd.
John William Dods Kirkland.
Alexander Malcolm MacEwen.
And. Macgregor Meldrum, M.A.
William David Mitchell.

14th April 1899.

Robert Letalle Proudfoot.
*James Scrimgeour.

DEGREE OF DOCTOR OF LAWS (LL.D.).†

The Degree of Doctor of Laws is conferred *honoris causâ tantum*. It was first granted in 1605. Previously to 1751 it had been conferred on seven persons only. Since then more than 400 names, including some of the most distinguished in Europe, have been added to the list. The degree is not conferred in absence except in very special cases.

The following is a list of those upon whom the Degree of Doctor of Laws has been conferred 1889-1899 : —‡

1889.

[1] Sir Syed Ahmed Khan, Bahadúr, K.C.S.I.
J. E. T. Aitchison, C.I.E., M.D., F.R.S., &c.
[1 2] James D. Dana.
[1] Francis Day, C.I.E., &c.
[1] Hon. David Dudley Field.
[1 2] C. Gegenbaur.
[1 2] E. Haeckel.
[1] Rudolf von Jhering, Dr. Jur.
[1 2] E. E. Kummer.
William Mackintosh, M.A., Q.C.
[1 2] Konrad Maurer.

* Passed with Distinction.

† Those to whom the Degree has been offered, if unable to be present at the Graduation Ceremonial immediately ensuing, may present themselves at any subsequent Ceremonial, on giving at least a week's notice.

‡ The names of those who received the Degree prior to 1859 will be found in the "Catalogue of the Graduates in the Faculties of Arts, Divinity, and Law of the University of Edinburgh since its Foundation," published in 1858, and of those who received the Degree from 1859 to 1888, both years included, in the List of Graduates published in 1889, and in previous CALENDARS.

[1] Conferred *in absentia*.

[2] Tercentenary Graduates unable to be present in 1884.

Maurice Paterson, B.A.
Richard Quain, M.D., F.R.S., &c.
[1] Rudolf von Roth, Ph.D.
[1 2] Barthélemy St. Hilaire.
[1 2] Jules Simon.
Whitley Stokes, C.S.I., C.I.E., D.C.L., &c.
[1 2] Geheimrath Heinrich von Sybel.
James Ward, M.A., D.Sc.
[1] William Dwight Whitney.
[1 2] B. Windscheid.

1890.

Sir Benjamin Baker, C.E.
Pierre Paul Leroy-Beaulieu.
Right Hon. Henry Chaplin, M.P.
Sir Dyce Duckworth, M.D.
Sir John Fowler, Bart., C.E.
[1] James Anthony Froude, M.A., LL.D.
Joseph H. Gilbert, M.A., Ph.D., LL.D., F.R.S.
William W. Goodwin, D.C.L.
James Hardy.
Sir John Kirk, M.D., G.C.M.G.
General Robert Maclagan, R.E.
John Marshall, M.A.
Right Hon. J. P. B. Robertson, M.P.
Frederic Seebohm, F.S.A.
Emeritus-Professor C. Piazzi Smyth, F.R.A.S., &c.
H. M. Stanley.
Spencer Walpole.

1891.

Alexander Asher, Q.C., M.P., &c.
John Beddoe, M.D., F.R.S, &c., &c.
Major C. R. Conder, R.E., D.C.L.
Felix Dahn.
Alexander Campbell Fraser, D.C.L., LL.D.
Cunningham Geikie, D.D.
George Joachim Goschen, M.P.
Sir George Murray Humphry, M.D., F.R.S.
Colonel Sir Colin Campbell Scott Moncrieff, K.C.M.G., C.S.I.
Professor Simon Newcomb.
Sir Herbert Stanley Oakeley, M.A., Mus. Doc., LL.D., D.C.L.
John Johnstone Rogerson, B.A., LL.B.

1892.

Surgeon-General James Macnabb Cuningham, M.D., &c.
[1] Rev. C. V. A. Van Dyck, M.D., D.D.
Robert M. Ferguson, Ph.D., F.R.S.E.
Rt. Hon. Sir Edward Fry.
[1] Theodore Nöeldeke.
Dr Jakob Schipper.
Hon. Sir Charles Tupper, Bart., G.C.M.G., C.B., M.D.
[1] Rev. Thomas Walker, M.A.
Robert Boog Watson, B.A., F.R.S.E.

1893.

Geheimrath Professor Dr Arthur Auwers.
Sir I. Lowthian Bell, Bart., F.R.S.
John Sutherland Black, M.A.
Sir George Buchanan, M.D., F.R.S.
Rt. Hon. Sir Stuart Knill, Bart.
Henry Duncan Littlejohn, M.D., F.R.C.S. Edin.
Alfred Marshall, M.A.
John Rhys, M.A.
His Excellency General the Right Hon. Lord Roberts, of Candahar, G.C.B., G.C.I.E., V.C., R.A. (B.).

[1] Conferred *in absentia*.
[2] Tercentenary Graduates unable to be present in 1884.

Lieut.-Colonel Justin C. Ross, C.M.G.
Rev. Walter C. Smith, D.D.
Alexander Moody Stuart.
Ramsay Heatley Traquair, M.D., F.R.S.

1894.

John Taylor Brown.
W. H. Gaskell, M.D., F.R.S.
Henry Goudy, M.A., LL.B.
Professor Franz Kielhorn, Ph.D.
Professor Diodato Lioy.
Charles B. Logan, W.S.
David Patrick, M.A., B.D.
Rt. Hon. Sir Charles John Pearson, M.A., Q.C., M.P.
James Alexander Russell, M.A., B.Sc., M.B., C.M.
George Wilson, M.A., M.D.

1895.

Rev. William Cunningham, M.A., D.Sc., D.D.
Hon. Lord M. T. Stormonth Darling, M.A.
Thos. Edmonson Charles, M.D.
Joseph Remi-Leopold Delbœuf, Ph.D., D.Litt., D.Sc.
S. Weir Mitchell, M.D.
Professor W. M. Flinders Petrie, M.A., D.C.L.

1896.

Sir Dietrich Brandis, Ph.D., K.C.I.E., F.R.S.
P. Hume Brown, M.A.
Giosuè Carducci.
Sir Charles A. Elliott, K.C.S.I.
Emeritus-Prof. David Masson, LL.D.
Sir J. Russell Reynolds, Bart., M.D., &c.
Douglas Argyll Robertson, M.D.
John Alexander Stewart, M.A.
David Duncan, M.A., D.Sc.
Professor Francis A. Walker, LL.D.

1897.

Professor James Dewar, M.A., F.R.S.
James Gairdner.
William M'Ewan.
Emeritus-Professor Sir Douglas Maclagan, M.D., &c.
John Rae, M.A.
The Rt. Hon. Lord Russell.
John Turnbull Smith.
John Wyllie, M.D.

13th April 1898.

Horace T. Brown.
John B. Bury, M.A.
William J. Courthope, C.B., M.A., D.Litt.
Thomas G. Law.
John W. M'Crindle, M.A.
Hon. Sir Walter Phillimore, Bart., D.C.L.
D. G. Ritchie, M.A.
J. Victor Carus.

30th July 1898.

Henry Pickering Bowditch, M.D., Member of the National Academy of Sciences, U.S.A.; Professor of Physiology, Harvard University.
Sir William Broadbent, Bart., M.D., F.R.S.
Thomas Lauder Brunton, M.D., D.Sc., F.R.S., Lecturer on Materia Medica, St Bartholomew's Hospital School, London.
David Ferrier, M.D., LL.D., F.R.S., Professor of Neuropathology, King's College, London.
Joseph Forster, M.D., Professor of Hygiene and Bacteriology, University of Strassburg.
M. le Comte de Franqueville, Officer of the Legion of Honour; Member of the Institute of France.

Carl Gerhardt, M.D., Professor of Medicine, University of Berlin.
Richard Burdon Haldane, Q.C., M.P.
Jonathan Hutchinson, M.D., LL.D., F.R.S., Emeritus-Professor of Surgery, London Hospital College.
Theodor Kocher, M.D., Professor of Surgery, University of Berne.
August Martin, M.D., Professor of Gynecology, University of Berlin.
Johann Mieulicz, M.D., Professor of Surgery, University of Breslau.
Ottavio Morisani, M.D., Professor of Midwifery, University of Naples.
William Osler, M.D., LL.D., Professor of Medicine, Johns Hopkins University, Baltimore.
William Playfair, M.D., LL.D., Professor of Obstetric Medicine, King's College, London.
Thomas George Roddick, M.D., Professor of Surgery, M'Gill University, Montreal; President of British Medical Association, 1897.
Siegmund Rosenstein, M.D., Professor of Clinical Medicine, University of Leiden.
Herman Snellen, M.D., Professor of Ophthalmology, University of Utrecht.
Sir Richard Thorne Thorne, K.C.B., F.R.S., Principal Medical Officer, Local Government Board, London.

29th November.

Rt. Hon. Lord Kitchener of Khartoum.

14th March 1899.

Rt. Hon. Lord Balfour of Burleigh, Secretary for Scotland; Lord Rector of the University.

14th April.

The Most Hon. the Marquess of Dufferin and Ava, K.C.B., G.C.B., G.C.M.G., G.C.S.I., G.C.I.E., D.C.L.
Field-Marshal the Right Hon. Lord Viscount Wolseley, K.C.B., G.C.B., G.C.M.G., K.C.M.G., D.C.L., &c., Commander-in-Chief of the Army.
William Mitchell Banks, M.D., F.R.C.S., Emeritus-Professor of Anatomy, University College, Liverpool.
Andrew C. Bradley, M.A., Professor of English Language and Literature, University of Glasgow.
The Very Rev. Archibald H. Charteris, D.D., Emeritus-Professor of Biblical Criticism and Biblical Antiquities, University of Edinburgh.
David F. Lowe, M.A., F.R.S.E., Headmaster, Heriot's Hospital School, Edinburgh.
George Walter Prothero, M.A., D.Litt., Professor of History, University of Edinburgh.
Major-General Andrew G. Wauchope, C.B., C.M.G.
Rev. Caleb Frank Gates, D.D., Euphrates College, Harpoot, Turkey (*in absentiâ*).

Bursaries, Scholarships and Prizes, &c., in the Faculty of Law.

I.—BURSARIES.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	1873	The Grierson Trustees.	£80 0 0	3	1	About £26 13 4	Senatus.
II.	1873	Geo. Cairns, Solicitor.	19 0 0	1	1	About 19 0 0	Senatus.
III.	1878	Dr Andrew Thomson.	100 0 0	4	4	25 0 0	Trus. of Dr Thomson.

I. There are three Grierson Bursaries, each of the value of £26, 13s. 4d. annually. Deserving students from the parishes of Crawford or Leadhills, applying to the Clerk of Senatus on or before the 1st day of September, are entitled to preference, if they satisfy certain conditions;[1] and if the applicant is commencing his first Winter Session of the Law Curriculum he will be entitled to hold the Bursary for three years, provided "he prosecutes his studies with proper diligence."[1] The subjects of examination are Elementary Latin, English, and Arithmetic. See Outline of Subjects, pages 105 and 106, and Time-Table of Examinations, page 122.

Failing preferential candidates, the Bursaries will be tenable for one year only, and will be awarded to candidates who have attended one year in the Faculty of Arts in some University. 1. In the case of those commencing their first Winter Session in Law, the award will be to the candidate who has passed highest in Latin and Moral Philosophy at the Arts Graduation examination in October. 2. In the case of candidates commencing their second Winter Session—to the most distinguished law-student of that standing, who, if not a Graduate in Arts, has passed satisfactorily in Latin and Moral Philosophy at the Arts Examination, either in October or earlier. 3. In the case of candidates commencing the third Winter Session of the Law Curriculum—to the most distinguished law-student of that standing who has passed satisfactorily in Latin, Moral Philosophy, and Logic at the Arts Examination in October or earlier. See Regulations, CALENDAR 1877-78, p. 370. *Bursars in* 1898 First year, no award. Second year, *Walter T. Watson.* Third year, *John Smart.*

II. The competition for the Cairns Bursary, which is tenable for one

[1] See CALENDAR 1877-78, p. 370. By "proper diligence" is understood regular attendance on Classes, and reasonable proficiency in Class Examinations.

year only, and is not subject to any preferences, is subject to the same conditions as those for the second year Grierson Bursary. This Bursary is open to Students who have completed one year in the Law Faculty. *Bursar*—1898, *John S. Mackay.*

III. Candidates must be Matriculated Students commencing their First Winter Session, and must intimate their intention to compete to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, and also to the Clerk of the Senatus on or before 15th September. Candidates of the name of Thomson or Traquair, or natives of the town or county of Dumfries or the city of Edinburgh, are preferred. The Examination is in Latin and Moral Philosophy, and is the same as the October Examinations in those subjects for M.A. See CALENDAR 1879-80, p. 345. *Bursar*—1898, no award.

Bursaries in the Faculty of Arts, the holders of which may study in the Faculty of Law (see also under Faculty of Arts):—

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patron.
I.	[illegible]	Dr Donald Grant, London.	£180 0 0 About	4	4	£45 0 0 About	Dr Grant's Trustees.
II.	[illegible]	John Jamieson, Edinburgh.	20 0 0 About	1	4	[illegible]	Principal and Two Professors.
III.	1871	The Sibbald Bursaries.	150 0 0	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
IV.	1883	Wm. Renton, Edinburgh.	19 19 6	1	1	19 19 6	Professors of Mathematics, Natural Philosophy, Chemistry, and Political Economy.
V.	1886	R. Allan, Feuar, Kelso.	About 90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
VI.	1889	Daniel MacLaurin, London.	62 10 0	1	4	62 10 0	Town Council.

II.—SCHOLARSHIPS.

VANS DUNLOP SCHOLARSHIPS.

Four Vans Dunlop Scholarships, each of about £100 per annum, tenable for three years, are more or less directly connected with the Faculty of Law:—

Candidates are required to matriculate for the year in which the competition takes place, and must produce evidence that they are eligible.

1. *Vans Dunlop Scholarship in Commercial and Political Economy and Mercantile Law*, for which both Law and Arts Students are eligible. For Regulations, see under Scholarships in Faculty of Arts.

Next vacancy in October 1901.

II. *Vans Dunlop Scholarship in the Law of Nature and Nations, Civil Law, and Constitutional Law and History.* The Regulations for competition are as follows:—

(*a*) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, shall have graduated in Law in this University, or shall have passed the Graduation Examination in the three subjects of examination for the Scholarship: provided they have written papers of the LL.B. standard at the Graduation Examination, and have obtained an average of not less than 75 per cent. of marks in these subjects.

(*b*) The Competition is by written Essays on branches of law to be announced at least one year before the date of competition. The precise subject of each of the essays will be set on the conclusion of the Graduation Examination in October 1901.

(*c*) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.

Next vacancy in October 1901.

1898. *J. A. Christie, LL.B.*

III. *Vans Dunlop Scholarship in Scots Law and Conveyancing.*

(*a*) The Competition is open to all Candidates who, within the three years immediately preceding the date of competition, have graduated in Law in this University, or shall have passed the Graduation Examination in Scots Law, Conveyancing, and Forensic Medicine: provided they have obtained at the Graduation Examination an average of not less than 75 per cent. of marks in these three subjects.

(*b*) The Competition is by written Essays on (1) the Civil Law of Scotland, (2) the Criminal Law of Scotland, and (3) Conveyancing, the particular branches of which will be announced at least one year before the date of competition. The precise subject of each essay will be set on the conclusion of the Graduation Examination in October.

(*c*) The Examiners are the Professors of the prescribed subjects, assisted by the additional Law Examiners.

Next vacancy in October 1900.

1897. *William Mitchell.*

CONDITIONS OF TENURE.

Each holder of No. II. and No. III. of these Scholarships will be required to deliver, to the satisfaction of the Faculty of Law, two courses of three lectures each on one of the subjects of examination for the Scholarship, viz., one course in the second, and the other in the third year of his tenure.

IV. *Vans Dunlop Scholarship in History.* For Regulations, see under Scholarships in Faculty of Arts. Next vacancy in October 1901.

V. *The Lorimer Travelling Scholarship.*[1]

The Lorimer Travelling Scholarship, of the annual value of about £40, tenable for two years, for the encouragement of the study of the "Law of Nature and Nations" in foreign Law Schools by Students and Graduates in the Faculty of Law, was founded by the Lorimer Memorial Committee and the Association for the better Endowment of the University. The Scholarship is open to Candidates who, during the two years immediately preceding that in which a scholar falls to be appointed, have completed the examinations for a Degree in Law in the University in the following subjects, namely—(1) The "Law of Nature and Nations" (including therein the Philosophy of Law); (2) The Civil Law; and (3) Either (*a*) Constitutional Law and History, or (*b*) Political Economy. The foreign Law School or Schools which the Scholar proposes to attend must be previously approved by the Faculty of Law. The Candidate who, in the opinion of the Faculty of Law, passes with most distinction in the examinations for Graduation in Law, in the subjects above set forth, during the two years immediately preceding the election, and who is willing to fulfil the conditions imposed by the Deed of Foundation, will be eligible, consideration being always given to his proficiency in the first of the above-named subjects, and to his knowledge of the modern language or languages spoken in the Law School or Schools where he proposes to study. For Deed of Foundation, see CALENDAR for 1892-93, p. 538. Next vacancy in July 1900.

1898. *Subharama Swaminadhan, M.A., LL.B.*

VI. *Gray Scholarship for Research.*—See under Faculty of Arts.

VII. *Thow Scholarships.*

These Scholarships, three in number, of the annual value of about £25 each, were founded by the Trustees of the late Miss Christiana Thow of Craigmore, West Ferry, near Dundee, according to the desire of Miss Christiana Thow and her Sister, Miss Margaret Thow, and out of respect to the memory of their Brothers.

The following are the Rules and Regulations applicable to the said Scholarships:—(1) The Scholarships shall be distributed annually, one to the most distinguished student for the Winter Session in the Class of Scots Law at the University of Edinburgh; another to the most distinguished for the Winter Session in the Class of Conveyancing at the said University; and the third to the most distinguished student for the Winter Session in any two of the following Classes at the said University, viz.:—Public Law, Civil Law, and Constitutional Law and History. (2) Each of the Scholarships shall be tenable only for one year by the student in the subject for which it has been bestowed upon him, but the same student may competently obtain one of the Scholarships set apart for the other subjects in a succeeding session,

[1] These Regulations may be altered before the date of next competition.

provided he has the necessary qualification. (3) No Student can hold two of these Scholarships for the same year, although he may have satisfied the conditions in other respects. In the event of any Student being first as regards two of the Scholarships, the Faculty of Law shall determine which Scholarship shall be awarded to him, and which shall be taken by the next most distinguished student. (4) There shall be no restriction as to holding one of these Scholarships along with another Scholarship or Bursary from another source.

1899. *Walter T. Watson* (Scots Law).
Edward John Baxter (Conveyancing).
W. S. Colville (Pub. and Constl. Law) } *equal.*
D. W. Burden (Civ. and Constl. Law) }
J. Pattison (Civ. and Constl. Law) }

III.—FUNDS FOR SPECIAL STUDY OR RESEARCH.

1. *The William Dickson Travelling Fund.* See under Faculty of Arts.

2. *The Earl of Moray Bequest for the Promotion of Original Research.* See under Faculty of Arts.

IV.—PRIZES.

1. The *Forensic Prize*, of the value of £10, founded in 1858 by the Forensic Society with the view of encouraging the study of Roman Law, is awarded annually either in July or in October, for the best Essay upon a subject prescribed by the Professor of Civil Law, or, as the result of a Special Examination, as may be found convenient. The subject of the Essay, or the date of the Examination, as the case may be, is announced by the Professor early in the session. It can be competed for only by Students of the Civil Law Class during the preceding year.

1898. *W. T. Watson.*

2. The *Muirhead Prize*, of about £15, 12s. 6d, annually, is awarded to the Student who gains the first place in the Class of Civil Law, as determined by the results of the periodical examinations during both the Winter and Summer Sessions.

1898. *J. Hossel Henderson,* } *equal.*
W. T. Watson, }

SCHOLARSHIPS, BURSARIES, AND PRIZES, &c., OPEN IN 1899-1900.

I.—Scholarships.

Where the competition is open to Graduates, their standing will be computed from the date of the Graduation Ceremonial immediately following the completion of their Law Examinations.

1. No III. of the above Scholarships (see page 322) will be offered

for competition after the conclusion of the Graduation Examinations in October 1900. The subjects of the Essays to be set for this Scholarship will be taken from the following branches of Law:—(1) The Law of Succession and Trust; The History of Criminal Procedure. (2) The Law of Heritable Securities; The Law of Entails. Names of Candidates must be entered before 23rd October.

2. No. V. will be open in July 1900. Names of Candidates to be entered before 1st July.

3. *Three Thow Scholarships.* See page 323.

II.—Funds for Special Study or Research.

1. *The Earl of Moray Bequest.* See page 186.
2. *The William Dickson Travelling Fund.* See page 185.

III.—Bursaries.

The examination for first-year Bursaries is in Latin and Moral Philosophy, and is the same as the October Examinations in these subjects for the Degree of M.A. Candidates are required to enter their names at the *Matriculation Office* on or before 1st October. Candidates for the second and third year Grierson Bursaries must apply on or before 18th October, and must state what distinctions they have attained in the Law Classes of the previous year.

1, 2, 3. *Three Grierson Bursaries*, No. I., page 320.
4. The *Cairns Bursary*, No. II., page 320.
5. The *Sibbald Bursaries*, No. III., page 192.
6. A *Thomson Bursary*, No. III., page 321.
7. *Renton Bursary*, No. 20, page 193.

IV.—Prizes.

4. The *Forensic Prize.* See page 324.
5. The *Muirhead Prize.* See page 324.
6. The *Lord Rector's Prize*, No. 1, page 189.
7, 8, 9. *The Gray Prize Essays*, Nos. 14-16, page 189.

The attention of all Bursars in the Faculty of Law is particularly called to the following Regulation:—

"Bursars connected with the Faculty of Law must annually attend and perform the work of at least one Class in the Faculty.

"Each Bursar must present a Certificate, signed by the Dean, attesting his regular attendance, &c., on each occasion on which he applies to the Factor for a payment."

Certificates, in terms of this regulation, will be given to Bursars by the *Dean of the Faculty of Law* after the 14th November; also at the end of the Session in April. In applying to the Dean for the Certificate

in November, Bursars must present to him their Class Cards for the Session, as evidence that they have enrolled in their classes; and at the end of the Session they must present to him certificates from the Professors to the effect that they have attended with regularity and have performed the work of the Classes. Payments are made by the Factor for the University, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 14th November for the Martinmas payments, and on and after 18th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B.—*Bursars and Scholars who desire to resign should at once intimate this to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

L. J. GRANT, Bart., B.A.,
Dean of the Faculty of Law.

Faculty of Medicine.

Dean—PROFESSOR THOMAS R. FRASER, M.D., LL.D., F.R.S.

Programme of Classes.

WINTER SESSION, 1899-1900.

Students who do not intend to graduate in Medicine in this University may attend any of the Classes in the Faculty on payment of the Matriculation and Class Fees. Those who intend to graduate must pass the Preliminary Examination before attendance on any Class will qualify for Graduation. Women are now admitted to Graduation.

The Classes in the Faculty will be opened on Tuesday, 17th October, and will meet daily (Saturdays excepted), unless otherwise stated.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.[1]
Surgery	17 Oct., 9 o'cl.	Prof. Chiene	£4 4
Materia Medica	17 Oct., 9 ,,	Prof. Fraser	4 4
Pract. Mat. Medica, includ. Pharmacy	18 Oct., 2 ,,	Prof. Fraser	3 3
Medicine	17 Oct., 10 ,,	Professor Sir T. Grainger Stewart	4 4
Physiology or Institutes of Medicine	17 Oct., 10 ,,	Prof.[6]	4 4
Practical Physiology	18 Oct., 3 ,,	Prof.[6]	3 3
Physiological Chemistry		Prof.[6]	2 2[5]
Chemistry	17 Oct., 10 ,,	Prof. Crum Brown	4 4
Chemistry—Advanced Course	9 Jan., 3 ,,	Prof. Crum Brown	2 2
Practical Chemistry	27 Nov., 11 and 2 o'cl.	Prof. Crum Brown	3 3
Advanced Botany	17 Oct., 11 ,,	Prof. B. Balfour	2 2[2]
Prac. Bot. (Advanced)	17 Oct., 11 ,,	Prof. B. Balfour	3 3[2]
Pathology	17 Oct., 11 ,,	Prof. Greenfield	4 4
Practical Pathology	18 Oct., *daily*	Prof. Greenfield	3 3
Clinical Instruction in the Royal Infirmary[4]	11 *daily*. . .	The Clinical Professors	Hospital Ticket.[3]
Clinical Surgery[4]—Royal Infirmary, *Mon. & Thurs.*	19 Oct., 12 o'cl.	Prof. Annandale	4 4
Clinical Medicine[4]—Royal Infirmary, *Tues. & Fri.*	17 Oct., 12-2 o'clock	Professors Sir T. Grainger Stewart, Fraser, and Greenfield; and Simpson on Diseases of Women	4 4

[1] Fees for second and subsequent attendances, see page 330.
[2] Besides Garden Fee of 5s.
[3] For Fees, see page 331.
[4] Only open to Students holding the Hospital Ticket.
[5] Fee for Students who have previously attended Practical Physiology in the University, £1, 1s.
[6] Vacant at date of going to Press.

WINTER SESSION, 1899-1900—*continued.*

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.[1]
Zoology (Elementary)[2]	17 Oct., 12 o'cl.	Prof. Ewart. ...	£4 4
Do. (Elementary Practical)[2].....	17 Oct.		2 2[3]
Do. (Advanced)[2].	17 Oct., 1.30 ,,		3 3[3]
Anatomy	17 Oct., 1 ,,	Prof. Sir William Turner	4 4
Practical Anatomy ...	2 Oct., *daily*		3 3
Midwifery & Diseases of Women & Childr.	17 Oct., 2 o'cl.	Prof. Simpson....	4 4
		Lecturers.	
Cl. Instruc. on Dis. of Children at Rl. Hosp. for Sick Children[5]... (*Tues., Wed., & Fri.*)	25 Oct., & 17 Jan., 11 o'cl.	J. Playfair, M.D., and Staff of the Rl. Hosp. for Sick Children ..	2 2[4]
Practical Physiology (Advanced)[6].....	24 Oct., 11 o'cl	E. W. Carlier, M.D., B.Sc.. T. H. Milroy, M.D., B.Sc..	4 4[4]
Diseases of the Larynx, Ear, and Nose..... (*Mon. & Thurs.*)	6 Nov., 11 ,,	Peter M'Bride, M.D., C.M....	2 2[8]
Vertebrate Morphology (with Laboratory Work).....	17 Oct., 2 ,,	John Beard, D.Sc.....	3 3[3]
Comparative Embryology	9 Jan., 2 ,,		3 3[4]
Physics[2].....	17 Oct., 3 ,,	C. G. Knott, D.Sc.	3 3
Regional Anatomy (Anatomical Demonstrations)	18 Oct., 4 ,,	David Hepburn, M.D.....	2 2[7]
Diseases of the Eye...		G. A. Berry, M.B.	2 2[4]
Pathol. Bacteriology	24 Oct.	D. A. Welsh, M.D.	3 3[4]
Diseases of Tropical Climates.....		Andrew Davidson, M.D.	2 2[4]
Clinical Instruct. on Diseases of the Skin[8][9]	18 Oct., 11 ,, 10 Jan., 11 ,,	W. Allan Jamieson, M.D.....	2 2

[1] Fees for second and subsequent attendances, see p. 330.
[2] Three Months' Course.
[3] Besides charge of 10s. for Laboratory Expenses.
[4] Five Shillings University Entrance-Fee for Non-Matriculated Students.
[5] Two courses, each qualifying. Only open to Students holding the Hospital Ticket. See page 331.
[6] This Class meets for two hours twice a week throughout the Winter Session.
[7] When taken along with Practical Anatomy, £1, 1s.
[8] Only open to Students holding the Hospital Ticket.
[9] Twice a week. Days and Hours to be fixed later.

SUMMER SESSION, 1900.

The Classes will be opened as follows, and will meet daily (Saturdays excepted), unless otherwise stated.

Classes.	Days of Opening and Hours of Lectures.	Professors.	Class Fees.[1]
Elementary Botany.....	1 May, 8 o'cl.	Prof. Bayley Balfour.	£4 4[2]
Practical Botany.....	1 May, 9 ,,		2 2[2]
Field Demonstrations on *Saturdays*.			
Operative Surgery and Surgical Appliances	17 April	Prof. Chiene....	3 3
Forensic Medicine and Public Health..... ...	1 May, 9 ,,	Prof. Sir Henry D. Littlejohn Prof. Hunter Stewart.....	4 4
Prac. Materia Medica (incl. Pharmacy).....	1 May, 10 ,,	Prof. Fraser.....	3 3
Practical Pathology....	1 May, 10 ,,	Prof. Greenfield.	3 3
Obstetrical and Gynecol. Operations (*Tues. & Fri.*)	1 May, 10 ,,	Prof. Simpson.	3 3
Practical Physiology....	1 May, *several hours*.	Prof. [9]	3 3
Physiological Chemistry			2 2[8]
Zoology (Elementary)..	1 May, 12 o'cl.	Prof. Ewart.	4 4
Zoology (Elemy. Prac.)	1 May.[4]		2 2[3]
Invertebrate Zoology...			2 2[3]
Do., with Laboratory Work.....			3 3[3]
Clinical Surgery,[5] Royal Infir (*Mon. & Thur.*)	3 May, 12 ,,	Prof. Annandale.	3 3
Clinical Medicine,[5] Royal Infirmary (*Tues. & Fri.*)	1 May, 12 to 2	Professors Sir T. Grainger Stewart, Fraser and Greenfield; and Prof. Simpson on Dis. of Women.	3 3
Clinical Instruction in the Royal Infirmary.[5]	12 *daily*. . .	The Clinical Professors.	Hospital Ticket.[6]
Physics	1 May, 12 ,,	Prof. Tait.	3 3
Chemistry (Organic)....	1 May, 1 ,,	Prof. Crum	2 2
Do. (Practical)..	1 May, 2 ,,	Brown.	3 3
Anthropology— (*Tues., Wed., Th.*)	1 May, 2 ,,	Prof. Sir W. Turner.	2 2[7]

[1] Fees for second and subsequent attendances, see page 330.
[2] Besides Garden Fee of 5s.
[3] Besides charge of 10s. for Laboratory Expenses.
[4] At hours to be arranged.
[5] Only open to Students holding the Hospital Ticket.
[6] See Fees, page 331.
[7] When taken with Practical Anatomy, £1, 1s.
[8] Fee for Students who have previously attended Practical Physiology, £1, 1s.
[9] Vacant at date of going to Press.

SUMMER SESSION, 1900—*continued.*

Classes.	Days of Opening and Hours of Lecture.	Professors.	Class Fees.[1]
			£ s.
Practical Anatomy.....	1 May, *daily.*	Prof. Sir W. Turner and Demonstrators.	2 2
		Lecturers.	
Diseases of the Eye ...	7 May, 10 o'clock.[8] / 8 May, 9 ,,	Geo. A. Berry, M.B.....	2 2[2,3]
Cl. Instruct. on Dis. of Children, at R. Hosp. for Sick Children.. (*Tues. Wed. & Fri.*)	2 May, 11 ,,	J. Playfair, M.D. and staff of the R. Hosp. for Sick Children	2 2[2,3]
Regional Anatomy (Anatomical Demonstrations)[4].....	1 May, 11 *daily.*	David Hepburn M.D..... ...	...
Diseases of the Larynx, Ear, and Nose..... (*Mon. & Thurs.*).	7 May, 11 o'clock.	P. M'Bride, M.D., C.M..	2 2[3]
Mental Diseases, with Cl. Instruct. at Morningside Asylum (*Mon. Wed. & Frid.*).....	7 May, 3 ,,	Thos. S. Clouston, M.D.	2 2[2]
Diseases of Tropical Climates		Andrew Davidson, M.D.....	2 2[2]
Experimental Pharmacology[5].....	2 May.	W. C. Sillar, M.B., B.Sc...	3 3[2]
Clinical Instruction on Diseases of the Skin[6,7]	5 May, 11 ,,	W. Allan Jamieson, M.D.....	2 2

[1] Fees for second and subsequent attendances, see below.
[2] Five Shillings University Entrance-Fee for Non-Matriculated Students.
[3] Only open to Students holding the Hospital Ticket.
[4] Free when taken along with Practical Anatomy.
[5] Two hours a day three times a week.
[6] Twice a week. Days and hours to be fixed later.
[7] Only open to students holding the Hospital Ticket.
[8] The class will meet in two sections.

FEES FOR SECOND AND SUBSEQUENT ATTENDANCES.

Second attendances on £4, 4s. Courses, £3, 3s.; on £3, 3s. Courses, £2, 2s.; subsequent attendances free. Second attendances on £2, 2s. Courses, no reduction; third or subsequent attendances, £1, 1s. Second or subsequent attendances on Class of Diseases of Children, £1, 1s. Clinical Surgery: nine months' ticket, if taken primarily, £6, 6s. (perpetual ticket); three months' after a six months' Course, £3, 3s.; three months' primary entry, £3, 3s.; second three months,

£2, 2s.; third three months, £2, 2s. Perpetual ticket for initial payment for any Course in the Faculty, £6, 6s. Practical Classes and Laboratories, no reduction.

OPPORTUNITIES FOR HOSPITAL PRACTICE.

Royal Infirmary, Edinburgh.—At 11 o'clock daily. 780 beds. Perpetual Ticket, in one payment, £12; Annual Ticket, £6, 6s.; Six Months, £4, 4s.; Three Months, £2, 2s. Separate payments, amounting to £12, 12s., entitle to a Perpetual Ticket.

Royal Edinburgh Hospital for Sick Children. 120 beds, of which 41 are reserved for Surgical Cases. Hospital Ticket for one year, £1, 1s., entitling Student to attend the General Practice of the Hospital, including the Out-Patient Department.

Edinburgh Royal Maternity and Simpson Memorial Hospital.—40 beds available for Clinical Instruction. The fees charged are:—For each Six External Cases, £1, 1s.; for three months' course of Internal Clinical Instruction, £1, 1s.

City Hospital, Edinburgh.—For Fevers and Infectious Diseases. Total number of beds, 400. Average daily number of patients during 1896, 302. There is at present no fee charged.

Royal Edinburgh Asylum for the Insane.—500 beds, available for Clinical Instruction to members of the Class of Mental Diseases. The fee for the course is £2, 2s.

Number of beds available for the Clinical Instruction of Students of the University, 1840.

MATRICULATION, &c. See page 27.

CLASS SESSIONS.

There are Two Sessions in each year, viz.:—

I. The Winter Session, which opens on Tuesday, 17th October 1899, and closes on Friday, 23rd March 1900. Practical Anatomy begins on 2nd, and Public Health Laboratory work on 3rd October 1899.

The Classes will meet for the last time before the Christmas Vacation on Friday, 22nd December 1899, and will reassemble on Tuesday, 9th January 1900.

II. The Summer Session, which opens on 1st May, and closes on 20th July 1900. Operative Surgery begins 17th April.

LABORATORIES, MUSEUMS, &c.

The University contains the following Laboratories and Museums, several of the latter belonging in part to the Professors of the respective subjects:—

I. LABORATORIES.

THE PHYSICAL LABORATORY, established with the view of affording Students a practical knowledge of the construction and use of physical apparatus, and the mode of conducting experimental inquiries, is open daily from 10 to 3, under the superintendence of Professor Tait.

THE ROYAL BOTANIC GARDEN LABORATORY, open daily for the practical study of plants and for research, under the superintendence of the Professor, assisted by J. H. Burnage, M.A., and A. W. Borthwick, B.Sc.

PHYSIOLOGICAL LABORATORY, for the prosecution of Physiological Research, and for the study of Practical Physiology, open daily, under the superintendence of the Professor, assisted by E. W. Carlier, M.D., B.Sc.; T. H. Milroy, M.D., B.Sc., and [1]

PRACTICE OF PHYSIC LABORATORY, for the study of Medicine, and for research in connection with the Practice of Physic, open daily, under the superintendence of the Professor, assisted by James G. Cattanach, M.B., C.M.

DISSECTING ROOMS, open daily under the superintendence of Professor Sir William Turner, assisted by David Hepburn, M.D.; E. J. H. Fraser, M.B., C.M.; David Waterston, M.B., C.M.; B. C. R. Aldren, M.B., Ch.B.; and other assistants. Open 2nd October 1899, and 1st May 1900.

THE CHEMICAL LABORATORIES [2] (distinct from the Practical Chemistry Class Room), have accommodation for forty Students. They contain the necessary equipment for a complete course of instruction in the various branches of chemical work and for research. The instruction given includes complex qualitative analysis, quantitative, inorganic and organic analysis (with special courses in gas analysis, assaying, &c.), and chemical preparations. The training is suited not only for students studying for Science and Arts Degrees or for the Examinations of the Institute of Chemistry, but also for persons desiring to qualify themselves as analysts, technical chemists, &c.

The Laboratories are open from 9.30 to 4.30 daily during the Winter and Summer Sessions, and are under the charge of Professor Crum Brown, assisted by Leonard Dobbin, Ph.D.; Hugh Marshall, D.Sc.; J. P. Longstaff, and John W. Eastham, B.Sc.

OBSTETRICAL AND GYNECOLOGICAL LABORATORY, for research and study of practical work, under the superintendence of the Professor, assisted by W. Fordyce, M.A., M.D.

[1] Vacant at date of issue.

[2] Fees for Chemical Laboratory:—*Whole day*—Winter Session, £10, 10s.; Oct.-Dec., Jan.-March, or Summer Session, £5, 5s. *Half day*—Winter Session, £6, 6s., Oct.-Dec., Jan.-March, or Summer Session, £3, 3s. Preference will be given to Students in the above order. Students who are not Matriculated may attend the Chemical Laboratory on payment of the Entrance Fee of 5s., in addition to the Laboratory Fee.

TUTORIAL CLASS OF CLINICAL MEDICINE, in the Wards of the Royal Infirmary, by Harry Rainy, M.A., M.B., C.M.; George Elder, M.D.; J. G. Cattanach, M.B., C.M.; Wm. Fordyce, M.D. (for Diseases of Women); under the superintendence of the Clinical Professors.

NATURAL HISTORY LABORATORIES, for study of the structure and development of Invertebrate and Vertebrate forms, open daily, under the superintendence of the Professor, assisted by J. Beard, D.Sc., Ph.D., and Gregg Wilson, M.A., D.Sc., Ph.D.[1]

MATERIA MEDICA LABORATORIES, for the study of Practical Materia Medica and Practical Pharmacy, and for Pharmacological and Pharmaceutical research, open daily, under the superintendence of the Professor, assisted by William C. Sillar, M.B., C.M., B.Sc., and D. B. Waters, M.B., Ch.B.

TUTORIAL CLASS OF CLINICAL SURGERY AND SURGICAL PATHOLOGY, in the Infirmary, by John Wheeler Dowden, M.B., C.M., and the Resident Surgeons, under the superintendence of the Clinical Professor.

TUTORIAL CLASS IN MIDWIFERY, by William Fordyce, M.A., M.D., under the superintendence of the Professor.

FORENSIC MEDICINE LABORATORY under the superintendence of the Professor, assisted by T. W. Drinkwater, Ph.D.

PUBLIC HEALTH LABORATORY, for laboratory work for candidates for Qualification in Public Health and for Hygienic investigation, comprises three departments, viz.: a Chemical, a Bacteriological, and a Meteorological Department, open daily, under the superintendence of the Professor, assisted by J. Buchanan Young, M.B., D.Sc., (Pub. Health). Opens 3rd October 1899 and 1st May 1900.[1]

SURGICAL LABORATORY, divided into two parts—(*a*) General Surgical Pathology, (*b*) Bacteriology,—is utilised for teaching Systematic Surgery, and every facility is afforded for investigation, under the superintendence of the Professor, assisted by Harold J. Stiles, M.B., C.M.

PATHOLOGICAL LABORATORY, for the study of Pathological Anatomy and for Pathological Research, including Histological and Bacteriological Departments, under the superintendence of the Professor, assisted by D. A. Welsh, M.A., M.D., B.Sc., and James Martin Beattie, M.B.

THE ROYAL EDINBURGH ASYLUM is open to members of the Class of Mental Diseases for Practical Instruction, under the superintendence of the Physician-Superintendent.

PRACTICAL INSTRUCTION in the use of the Ophthalmoscope and in the detection of errors of refraction is given to members of the Class of Diseases of the Eye at the Eye Wards of the Royal Infirmary, under the Superintendence of the Lecturer.

DISEASES OF THE LARYNX, EAR AND NOSE.—In connection with

[1] Fees—Winter Session, £10, 10s.; Summer Session, £6, 6s.

this subject. Tutorial Instruction in the Practical Methods of examining patients and in the use of instruments and appliances is given by Dr Logan Turner at suitable hours.

DISEASES OF THE SKIN.—Tutorial Instruction in the Practical Methods of examining patients, of using the microscope in the diagnosis of cutaneous affections, in the employment of instruments and the application of remedies, is given by Dr Norman Walker, at suitable hours.

II. MUSEUMS. See pages 54-57.

Courses of Lectures, &c.

1899-1900.

I. BOTANY.

PROFESSOR BALFOUR.

Winter Session, 1899.

LECTURES.—A three months' Course of Advanced Lectures and an Advanced Course in Practical Botany will be given in the Winter Session.

Summer Session, 1900.

1. LECTURES.—The Course is a general one—Morphological, Physiological, and Taxonomic. Lectures are given every Monday, Tuesday, Wednesday, Thursday, and Friday. In addition, lectures on special parts of the subject are given at intervals during the Session.

2. PRACTICAL CLASS.—In this class opportunity is given for the examination of microscopic structure of plants, and for the study of life-histories of plants illustrating the lectures. It is conducted by the Professor and Assistants.

3. EXCURSIONS.—Excursions are made on Saturdays for the practical study of plants in the fields.

The Royal Botanic Garden, with the Botanical Museum and Herbarium, are open daily for the examination of living as well as preserved specimens of plants.

II. NATURAL HISTORY.

PROFESSOR EWART.

1. LECTURES ON ZOOLOGY. —*Winter Session.*—The first part of the course will treat of the Principles of Biology as illustrated by the Life-History, Morphology, and Physiology of one of the Vertebrata. The Distinctive Characters of the Chordata and the structure, habits, &c., of a series of vertebrate types will next be considered. The rest of the course will be chiefly devoted to : (1) Leading types of Invertebrates ; (2) Structure and life-history of the more important animal parasites ; and (3) Elements of Embryology, Classification, and Geographical Distribution of Animals.

Summer Session. -An Elementary Course, qualifying for the First Professional and the First B.Sc. Examinations, and *pro tanto* for graduation in Arts, will be given by the Professor, during the Summer Session 1900.

2. ELEMENTARY PRACTICAL ZOOLOGY.—*Winter and Summer Sessions.*— In these Classes Students have the opportunity of studying practically the more important types described in the Lectures, amongst others :—Amœba, Paramœcium, Hydra, Hirudo, Arenicola, Helix, Astacus, Raia, Rana, Columba, and Lepus.

3. ADVANCED COURSES.—These Courses are intended to assist students preparing for the Degree of B.Sc. in Zoology.

(1) The Intermediate Course will be held during the Summer Session, and will be devoted to the Systematic Zoology of the Invertebrata. This class is prescribed for the Second B.Sc. Examination in Zoology and Comparative Anatomy.

(2) During the first half of the Winter Session an Advanced Course of Lectures and Laboratory work will be given by Dr Beard, University Lecturer on Vertebrate Zoology, on the Comparative Morphology of the Vertebrata. (See Faculty of Science).

The Laboratory work will extend over the first half of the Winter Session and the Summer Session.

RESEARCH WORK.—The Laboratories are also available during both Sessions for research. For Regulations, see page 387.

COMPARATIVE EMBRYOLOGY.

VERTEBRATE MORPHOLOGY.

J. BEARD, D.SC.

For Synopses, see under Faculty of Science.

III. CHEMISTRY.

PROFESSOR CRUM BROWN.

1. LECTURES.—In the Lectures the general laws of chemical action are explained and illustrated.

The chief non-metallic elements and their more important compounds are discussed in detail. The metals and the different series of metallic salts are considered more generally, details being given in the case of the more important substances.

The principles upon which the classification of organic substances is based are explained, and the properties of the chief groups illustrated by means of examples.

Tutorial Classes, once a week, are conducted by Dr Dobbin.

A course of 50 lectures on Organic Chemistry is delivered in Summer.

A Class for Advanced Students is held in Winter. The subject for the Winter of 1899-1900 is "Organic Alkaloids."

2. LABORATORY. In the Laboratory, Students who can devote several hours each day to work, are taught Chemical Analysis (including Mineral Analysis, Organic Analysis, and Gas Analysis), the preparation of chemical substances, and the examination and determination of their properties. Full equipment for instruction in metallurgical work and assaying has recently been provided. Students who are sufficiently advanced in such practical work may engage in the investigation of chemical problems under the superintendence of the Professor and the chief assistant.

3. PRACTICAL CLASSES.—The work of these classes consists in the study of the reactions of the commoner Salts.

Class-Book.—Notes on Reactions of Salts (Thin).

Students who have worked at least three months in the Laboratory need not attend the class of Practical Chemistry before appearing for the First Professional Examination in Medicine, for the First B.Sc. Examination, or for Examination in Chemistry for M.A.

IV. PHYSICS.

PROFESSOR TAIT (*Summer*), and CARGILL G. KNOTT, D.Sc. (*Winter*), *Lecturer.*

The subjects embraced in the Course of Physics are :—

1. Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

2. Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, and the Physical Measurement of Time.

3. Sound, and Wave-propagation in general, Intensity, Pitch, and Quality of Musical Sounds, Harmonics, Concords, &c.

4. Heat, its Nature, Effects, Measurement, Transference, and Transformations—Measurement of Temperature and of Absolute Temperature ; Thermo-dynamics.

5. Light (1) Geometrical Optics, Speed of Light, Laws of Reflection and Refraction ; Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes ; Images, Conditions of Distinct Vision ; (2) Physical Optics, Interference, Dispersion, Diffraction, Double Refraction, Polarization, Spectrum Analysis.

6. Electricity, including Frictional and Voltaic Electricity Thermo- and Magneto- Electricity, Electro-Dynamics, and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltameters, &c.

Text-books : Tait's *Properties of Matter ;* Knott's *Physics.*

V. ANATOMY.

PROFESSOR SIR WILLIAM TURNER.

Winter Courses.

1. LECTURES ON ANATOMY, at 1 P.M. — It is intended in this Course to bring before the Student, in a systematic manner, the structure of the Human Body. The different systems and organs will be described, both in the more obvious arrangements and relations of parts which can be examined by the naked eye, and in their more minute or microscopic structure. The Course includes, therefore, both Textual or General Anatomy and Descriptive Anatomy. The Lectures are illustrated by recent dissections, by wet and dry preparations, by a large collection of Osteological specimens, and by drawings and diagrams. Structures too minute to be recognised by the naked eye are demonstrated under the Microscope.

To assist the Junior Members of the Lecture Class to acquire a knowledge of Osteology, Tutorial Demonstrations on the bones will be given during the earlier months of the Session without additional fee. All the members of this class have access to a systematically arranged series of osteological specimens and of models. Written Examinations for both Junior and Senior Students are held periodically during the Session.

Text-Books.—Gray's "Anatomy," or Cleland and Mackay's "Anatomy," Quain's "Elements of Anatomy," Holden's "Osteology."

2. PRACTICAL ANATOMY, under the superintendence of the Professor, aided by the Demonstrators, David Hepburn, M.D., C.M.; E. H. Fraser, M.B., C.M.; David Waterston, M.B., C.M.; and B. C. R. Aldren, M.B., Ch.B., and by several other assistants. Examinations of both Junior and Senior Students on dissected parts are conducted by the Demonstrators and the Professor. Special tutorial Demonstrations will be given to Senior Students on the joints, brain, organs of special sense, and other viscera.

This Course will commence on 2nd October. The Dissecting-rooms are open from 9 A.M. to 5 P.M., and on Saturdays

from 9 A.M. to noon. The Mackenzie Bursaries are awarded to members of this Class for proficiency in dissection.

Text-Books.—"Demonstrations of Anatomy," by Ellis, or Heath's "Practical Anatomy," or Holden's "Manual of the Dissection of the Human Body," or Cunningham's "Manual of Practical Anatomy."

REGIONAL ANATOMY (ANATOMICAL DEMONSTRATIONS).

DAVID HEPBURN, M.D., *Lecturer.*

In this Course, which is conducted in the Theatre, the structure of the human body is displayed and demonstrated topographically, from the surface inwards.

This Class meets about ninety times, and non-competitive Written Examinations are held monthly during the Session.

Summer Courses.

PRACTICAL ANATOMY.

PROFESSOR SIR WILLIAM TURNER.

This Course, beginning on 1st May, is the same as in Winter. The Rooms are open from 9 A.M. to 5 P.M.; on Saturdays from 9 A.M. to noon. Examinations are conducted on dissected parts by the Professor and by the Demonstrators, David Hepburn, M.D., C.M.; E. H. Fraser, M.B., C.M.; D. Waterston, M.B., C.M.; and B. C. R. Aldren, M.B., Ch.B.; and other assistants, and the joints, brain, and organs of sense will be specially demonstrated.

REGIONAL ANATOMY (ANATOMICAL DEMONSTRATIONS).

DAVID HEPBURN, M.D., *Lecturer.*

This Course, open without additional Fee to those engaged in Practical Anatomy in the Summer, will consist of demonstrations on some special departments of Anatomy.

VI. PHYSIOLOGY.

PROFESSOR [1]

Course of at least 100 Lectures, held in Winter:—

The outlines of the Courses in Physiology and Practical

[1] Vacant at date of going to Press.

Physiology as revised by the late Professor Rutherford were as follows, but they may be modified by his successor.

1. The Structure, Composition, and Functions of the Elementary Tissues of the Body.

2. The Nutrition of the Body, including Circulation, Respiration, Alimentation, Nutrition of the Tissues, Excretion, together with the minute structure of the organs concerned.

3. Animal Heat.

4. Voice and Speech.

5. The minute structure and physiology of the Sense organs and the special physiology of the Nervous System.

6. Reproduction and Development.

Practical Physiology.

This Course is divided into three sections—

1. *Practical Histology*, in which every Student prepares, examines, and preserves for himself most of the tissues and organs of the body. Each student is provided with a microscope, and all reagents.

2. *Practical Chemical Physiology*, in which every student performs the qualitative and quantitative analysis of the Urine in its normal and abnormal conditions, with special reference to clinical work, and such practical work at the Chemistry of Proteids and Carbohydrates, Blood, Milk, Bile, and Digestion, as is possible in a class.

The above sections of the class are held both in Winter and in Summer. The class meets sixty times.

3. *Demonstrations of Physiological Instruments.*—This section of the class is held only in Winter, and is open to all who have attended the other sections of the course.

Advanced Practical Physiology.

See Synopsis under Faculty of Science.

E. W. CARLIER, M.D., B.Sc., } *Lecturers.*
T. H. MILROY, M.D., B.Sc., }

Physiological Research.

The Physiological Laboratory is open daily for the prosecution of Research. Application must be made to the Professor.

VII. MATERIA MEDICA.

PROFESSOR THOMAS R. FRASER.

Materia Medica comprises the subjects of pharmacognosy, pharmacy, pharmacology, and therapeutics, diet, remedial uses of electricity and galvanism, heat and cold, climate, &c. Instruction in Materia Medica is given in (A) a course of 100 Lectures during the Winter Session, and in (B) Practical Classes during the Summer Session, and of equivalent duration during the Winter Session.

A.—Lectures on Materia Medica—This course includes the natural history, sensible and chemical properties, physiological action (or pharmacology), therapeutical uses, and modes of administering remedies, ordinarily so called. Such remedies consist of (*a*) inorganic substances; (*b*) chemical products; (*c*) vegetable substances; (*d*) animal substances. Although formerly comprised in the course of instruction in Materia Medica, the remedial uses of Diet, Electricity, Climate, &c., cannot now be taught with any advantage in this course, as, under the New Medical Ordinances, the study of Materia Medica is required to be completed before the student has entered upon the study of the diseases to which the above are applicable.

B.—Practical Classes.—*Practical* instruction is given in the following subjects, which cannot satisfactorily be taught in lectures: 1. Pharmacy, or the processes for obtaining the pharmaceutical preparations of drugs. 2. Prescription-writing 3. Dispensing, or the making up of medicines in forms suitable for administration in disease.

It is recommended that the Practical Class be attended before the lectures on Materia Medica. Practical classes are taught in the Summer Session daily, at such hours as are found most convenient. A winter class will also be formed in October.

Research Laboratories.

The above laboratories will be open daily for research on the pharmacological action and chemical composition of medicinal substances, under the superintendence of the Professor and his assistants. Application to be made to the Professor.

EXPERIMENTAL PHARMACOLOGY.

W. C. SILLAR, M.B., C.M., B.Sc., *Lecturer.*

This course consists of (1) practical instruction in the methods employed in pharmacological research and (2) the experimental study of the pharmacological action of a number of typical medicinal substances.

The Course is adapted for students who desire a practical knowledge of pharmacology, and who have attended the Class of Materia Medica.

Previous attendance at the Class of Advanced Practical Physiology is recommended.

The Course will commence in October or May.

VIII. PATHOLOGY AND MORBID ANATOMY.

PROFESSOR GREENFIELD.

This Course includes General Pathology, General Pathological Anatomy and Histology, and Systematic Morbid Anatomy :—

1. General Pathology (including General Pathological Anatomy), *i.e.* the study of the processes of disease, &c. Under this head are considered Degenerative Processes, Inflammation, Repair, Morbid Growths, &c.

2. General Etiology is treated in fuller detail with reference to Parasitic and Infective Diseases, and includes Bacteriology and methods of bacteriological research.

3. Systematic Morbid Anatomy and Histology—a study of the more important diseases of the principal systems and organs of the body.

In illustration of the lectures, there are frequent naked eye microscopic, and lantern demonstrations.

Practical Pathology.

Classes for Practical Instruction in Morbid Anatomy and Pathological Histology are conducted in the Pathological Laboratory microscopes and other necessary apparatus being supplied. The Course consists of—1st. Naked Eye Demonstrations; 2nd. Histological investigation and preparation of Morbid Structures and Organs; 3rd. Elementary Bacteriology.

In Winter the class meets five times a week, from the beginning of the Session till the end of January; in Summer, five times a week, from the beginning of May till the end of July.

The Laboratory is also open daily from 10 A.M. till 4 P.M. for Pathological Research, under the Professor and his Assistants.

Pathological Bacteriology.

D. A. WELSH, M.D., *Lecturer.*

The Course is a practical one, consisting of Laboratory Instruction, Demonstrations, and Lectures:—(a) *General.* Morphology and Life History of Micro-organisms; Preparation of Culture Media; Methods of Isolation and Cultivation, including Anaerobic Cultures; Methods of Staining; Separation of Bacterial Products; Inoculation, &c.

b) *Special.* A Systematic Study of Organisms Pathogenic to the Human Subject—their characters, their modes of producing disease, &c. A number of the more important non-pathogenic organisms are also studied.

The Course is given in Winter, but may also be given in Summer.

Text-Book.—"Manual of Bacteriology," by Muir and Ritchie.

IX. FORENSIC MEDICINE AND PUBLIC HEALTH.

Part I.—Forensic Medicine.

PROFESSOR SIR HENRY DUNCAN LITTLEJOHN.

MEDICAL EVIDENCE GENERALLY.

(1) Documentary—(2) Oral (3) Experimental — Examination of the living; identity; examination of the dead; identity; cause of death; exhumations, autopsies.

MEDICAL EVIDENCE SPECIALLY.

Questions affecting Health or Life.—(1) Assaults and Homicide—Wounds and other external injuries; asphyxia. Starvation. Heat and cold. Poisons—(2) Suicide—(3) Offences against Chastity—Rape, &c.: concealment of pregnancy; criminal abortion: infanticide—(4) Malpraxis and Neglect of Duty.

Questions affecting Civil Rights or Social States.—Marriage and Divorce. Impotence and sterility. Live birth. Survivorship. Insanity. Feigned diseases.

Text-Books.—Taylor's "Medical Jurisprudence," Guy's "Principles of Forensic Medicine."

Part II.—Public Health.

PROFESSOR HUNTER STEWART.

Fourteen Lectures of the Course will be devoted to Public Health.

X. PRACTICE OF PHYSIC.

PROFESSOR SIR THOMAS GRAINGER STEWART.

This Course comprises—

I. An account of the nature, and more particularly of the clinical characteristics, and the treatment of the different types of morbid action.

II. An account of the morbid anatomy, clinical history, causes, diagnosis, prognosis, and treatment of the diseases of the different systems and organs.

It is intended that each Course shall be, as far as possible, complete; but that, while the general principles (included in Part I.) shall be fully discussed each session, the diseases of individual systems (included in Part II.) shall be taken up in different order year by year, and certain systems selected for more minute consideration.

The Course is illustrated by specimens from the Anatomical Museum, and from the Professor's private collection, as well as by numerous drawings, diagrams, and charts.

Tutorial Class.

Practical instruction in connection with the Course is given to the members of the Class by the Assistant.

Text-Books. — Fagge's, Roberts's, Bristowe's, Osler's, or Frederick Taylor's "Practice of Medicine." Students are also advised to consult the Professor's "Introduction to the Study of Nervous Diseases," his "Clinical Lectures on Important Symptoms."

MENTAL DISEASES.

THOMAS S. CLOUSTON, M.D., *Lecturer.*

This Course consists of—

1. Systematic Lectures in the University during the Summer Session on the Classification, Symptoms, Causes, and Treatment of Mental Diseases.

2. Pathological demonstrations, naked eye, lantern, and microscopic, in the University and at the Royal Asylum, Morningside, of the Morbid Anatomy of Insanity. Students will have an opportunity of original investigation in the Pathological Museum of the Asylum.

3. Clinical instruction at the Royal Asylum, Morningside (West House), in all the forms of Mental Disease. Students have the opportunity of personally coming in contact with and examining the cases, so as to learn the modes of managing and dealing with patients labouring under Mental Disease, and they are exercised in the diagnosis of Insanity and the drawing up of certificates; the aim being to enable them to recognise its early stages, to distinguish its varieties, to adopt suitable treatment, and to advise the relatives as to sending the patient to an asylum. There is a clinical field of 500 beds, comprising all the wards except those for private patients. This part of the course extends through the Summer and the last month of the Winter Session.

4. Instruction in regard to the medico-legal, hereditary, educational, and social relations of Mental Disease, and on its bearings and significance in ordinary medical practice.

There are Free Clinical Clerkships, tenable for three months,

in the Royal Edinburgh Asylum, and in several other Asylums, in connection with the class.

Text-Book.—Dr Clouston's "Clinical Lectures on Mental Diseases," Maudsley's "Pathology of the Mind," Bevan Lewis' "Text-Book of Mental Diseases."

DISEASES OF TROPICAL CLIMATES.

ANDREW DAVIDSON, M.D., *Lecturer.*

The Course will consist of twenty-five Lectures, and of demonstrations of the Micro-organisms of tropical diseases.

The Lectures will comprise an account of 1. The chief endemic maladies—Malaria, Dysentery, Liver Abscess, Beriberi, Yaws, &c., and of Sunstroke.

2. Leprosy and other bacterial diseases.

3. The three great tropical pestilences, Cholera, Plague, and Yellow Fever, along with the principles of Epidemiology.

4. The less known fevers of tropical and subtropical regions.

5. The more important parasitic maladies—Filariasis, Ankylostomiasis, Bilharzia disease, &c.

6. Climatology and tropical Hygiene.

Text Book.—Davidson's "Hygiene and Diseases of Warm Climates."

The dates of commencement and hours of the Lectures for the Winter and Summer Sessions will be announced later.

XI. SURGERY.

PROFESSOR CHIENE.

Winter Session.

1. *Lectures.* This Course is devoted to a systematic consideration of the Principles and Practice of Surgery. Each course is intended to embrace, as far as possible, a complete view of the present aspects of the Science and Practice of Surgery.

Written examinations are held at stated periods, and at the end of the Session a practical examination is held on the work of the Tutorial Classes.

2. *Tutorial Instruction*, at hours most convenient for the students, includes—

(*a*) *Practical Instruction* in *Bandaging*, and the *Treatment* of *Fractures* and *Dislocations* on the living subject. This class is divided into sections for Senior and Junior Students.

(*b*) Weekly Revisal of the Lectures, together with Demonstrations of the Preparations in the Surgical Museum illustrative of the Lectures on Surgery.

(*c*) Special Demonstrations to Senior Students on

(1) Surgical Anatomy.
(2) Surgical Pathology.
(3) Surgery of the Ear.

These Demonstrations are illustrated by museum specimens and lantern slides.

Summer Session.

The Summer Session is devoted to the Practical Aspects of Surgery. Special attention is given to Surgical Anatomy and Operative Surgery. The class meets in April, May, and June. Oral examinations and tutorial instruction in the Treatment of Fractures and Dislocations, and in the uses of surgical instruments, form a special part of the course. Special demonstrations on Surgical Pathology.

The Surgical Laboratory for (1) Surgical Pathology; and (2 Bacteriology, is open daily for original work during the Winter and Summer Sessions, under superintendence of the Professor, assisted by Harold J. Stiles, M.B. Applications to be made to the Professor.

Text-Books. Winter Session.—The Professor's "Lectures on the First Principles of Surgery"; Keen and White's Text-Book of Surgery: Da Costa's "Manual of Modern Surgery." *Summer Session.* The Professor's "Lectures on Surgical Anatomy," and Joseph Bell's "Manual of Surgical Operations," 1892: Kocher's Operative Surgery translated by H. J. Stiles).

DISEASES OF THE EYE.

GEORGE ANDREAS BERRY, M.B., C.M., *Lecturer.*

The Course will consist of twelve systematic lectures in the University, and of twelve or more clinical lectures at the Royal Infirmary.

In addition there will be meetings for individual clinical instruction, including Refraction and Ophthalmoscopy.

Text-Books. Berry's "Diseases of the Eye," Swanzy's "Handbook on Diseases of the Eye," Nettleship on "Diseases of the Eye," Fuchs' "Text-Book of Ophthalmology."

DISEASES OF THE LARYNX, EAR, AND NOSE.

P. M'BRIDE, M.D., C.M., *Lecturer.*

The Course of Instruction given in the Royal Infirmary consists of not less than eighteen lectures, of which six are systematic and twelve are clinical. These are delivered on Mondays and Thursdays, at 11 o'clock A.M.

A concise account of the more common diseases of the Ear, Nose, and Throat, and their treatment, is given in the systematic lectures.

In the clinical lectures, patients are brought before the class and their condition is examined into and discussed, and, where possible, operative treatment is carried out. Methods of examination, instruments and appliances used in diagnosis and treatment are demonstrated.

Members of the class may attend the out-patient cliniques of the Department on Tuesdays and Fridays at eleven o'clock, and operations in the Wards.

Tutorial instruction in the practical methods of examining patients, and in the use of instruments and appliances, is given by Dr Logan Turner, at suitable hours in connection with the lectures.

XII. MIDWIFERY AND THE DISEASES OF WOMEN AND CHILDREN.

PROFESSOR SIMPSON.

The Course of Instruction comprises Lectures on—

I. Anatomy and Physiology of the Female Organs of Reproduction.

II. Physiology, Pathology, and Therapeutics of Pregnancy.

III. Parturition—Natural (Eutocia), and Morbid (Dystocia).

IV. Hygiene, Pathology, and Therapeutics of the Puerperal State.

V. Hygiene, Pathology, and Therapeutics of Infancy.

VI. Special Pathology and Therapeutics of the Female Organs of Reproduction.

One day weekly is devoted to the Gynecological Section of the Course; and the Diseases of Women may be studied clinically in the Royal Infirmary, in the Buchanan Medical Ward, in connection with the class of Clinical Medicine.

After the Class-roll is made up, Tutorial classes are formed for Practical Instruction in the use of Obstetric and Gynecological Instruments and Appliances.

Midwifery may be studied clinically in the Royal Maternity, of which the Professor is, *ex officio*, one of the Medical Officers, and where he attends during the first three months of the Winter Session. The Professor makes a special Clinical visit with the Students who have taken the Maternity Ticket, on Saturdays, at 10 A.M.; and he or one of the Assistant Physicians gives Clinical Instruction on Wednesday afternoons at 4 P.M.

Summer Session.

A Course of Instruction in Obstetric and Gynecological Operations, with Demonstrations of the use of Instruments and Appliances, is conducted in the Summer Session, at 10 A.M.

On Tuesdays and Fridays the Professor gives Lectures and Demonstrations. On the other days the sections of the class are trained in the investigation and treatment of Female Diseases, and the members of the class have an opportunity of practising operations on lay figures.

Text-Books.—Playfair's, Lusk's, or Parvin's "Midwifery." The Professor's "Contributions to Obstetrics and Gynecology.' Hart and Barbour's "Manual of Gynecology." Ballantyne's "Diseases of Infancy."

XIII. CLINICAL SURGERY.

PROFESSOR ANNANDALE.

The subjects of this Course are the symptoms, diagnosis, pathology, and treatment of Surgical diseases and injuries as met with in the living body, and the modifications and com-

plications which occur in connection with them. Patients are brought before the class in the University-Clinical Surgical Theatre of the Infirmary, and their condition is carefully examined and discussed, due regard being taken to avoid injuring their feelings or aggravating their disease. The history and probable nature of the case having been stated, the proper treatment is suggested and described, and any required operations or other treatments are carried out at once, or at the first convenient opportunity. Ward Cliniques are given at least two days in the week by the Professor, and on other two days in the week the cases of patients attending the out-patient department are specially demonstrated by the Assistant Surgeon, Mr Hodsdon, so as to instruct the students in the common and minor surgical affections. Practical instruction as to the examination of patients, the observation of symptoms, the treatment of surgical emergencies, the use of instruments, the application of dressings, and other surgical details is given by the Clinical Tutor (Dr J. Wheeler Dowden) attached to the Chair. Such instruction is *free* to all Students attending the Course.

Text-Books. Any of the recent standard works on Surgery. Students are also advised to study the best works (old and new) on the special subjects of Practical Surgery.

In connection with this class it is to be noted that under the New Regulations (1.) Nine months' attendance on Lectures is required, and it is advised that at least six months of this be continuous. (2.) That attendance at the *Ward* Cliniques is compulsory and forms part of the Course. (3.) Students must also produce a certificate that they have acted as Dresser or Clerk in Surgical Wards for six months.

XIV. CLINICAL MEDICINE.

PROFESSORS SIR THOMAS GRAINGER STEWART, FRASER, GREENFIELD, AND (FOR DISEASES OF WOMEN), SIMPSON.

This Course, consisting of Clinical Lectures and Instruction in the University wards of the Royal Infirmary, is conducted

conjointly by the Clinical Professors all being on duty both in the Winter and Summer Sessions, the Professor of Midwifery giving lectures and demonstrations on Gynecology on certain days.

The Course consists of:—1. Practical Instruction on three days a week at the bedside. 2. Critical Expositions and Discussions of cases in the lecture-room on two days a week.

Every facility is afforded to students to act as Clinical Clerks, and those are preferred who have had a course of tutorial instruction. At the close of each Summer Session, six gentlemen, who have been members of the Class, are appointed Resident Physicians in the Clinical Wards for the following Winter and Summer Sessions.

Clinical Tutorial Class.

Practical instruction in the Methods of Physical Examination is given to the Class by the University Clinical Tutors.

Junior Students are strongly advised to take this course of instruction along with their first course of Clinical Medicine.

DISEASES OF THE SKIN.

WILLIAM ALLAN JAMIESON, M.D., C.M., *Lecturer.*

The Course of Instruction, which is given in the Royal Infirmary, consists of not less than twenty Clinical Lectures, delivered in the Medical Theatre on Wednesdays and Saturdays at 11 o'clock a.m. In these, patients are brought before the class and their condition is examined into and demonstrated, and the appropriate treatment prescribed and illustrated.

The Ordinary Out-patient Cliniques of the Department are held on Wednesdays and Saturdays, and operations are performed in the Wards on Tuesdays and Fridays. These are open to all Students holding an Infirmary Ticket, and also to Members of the class.

Tutorial Instruction in the practical methods of examining patients, of using the microscope in the diagnosis of cutaneous affections, in the employment of instruments and the application

of remedies, is given by Dr Norman Walker, at suitable hour in connection with the Lectures.

Text-Book.—Dr Jamieson's "Diseases of the Skin."

CLINICAL INSTRUCTION ON DISEASE IN CHILDREN

(*at the Royal Hospital for Sick Children*).

JOHN PLAYFAIR, M.D., *Lecturer*, with the Ordinary and Extra Physicians.

The Courses consist of one Clinical Lecture and two Ward Cliniques weekly, demonstrations in the post-mortem room, and attendance at the out-patient department, also at operations on fixed days. In the surgical out-patient department a large number of minor surgical operations are done daily.

The Courses are made as practical as possible, and students have full opportunities given for studying cases clinically and for becoming acquainted with the methods of examining children, and the diseases more peculiar to them.

At least two Courses will be conducted annually, one in the Winter before Christmas, and one in the Summer Session. A second Winter Course after Christmas will also be given if sufficient students come forward.

Graduation in Medicine and Surgery.

A—REGULATIONS APPLICABLE TO ALL WHO BEGIN MEDICAL STUDIES AFTER 1ST OCTOBER 1892.

For those who began Medical Studies before 1st October 1892, see Abridged Regulations B, page 383.

I. Four Degrees in Medicine and Surgery are conferred by the University of Edinburgh, viz., Bachelor of Medicine (M.B.), Bachelor of Surgery (Ch.B.), Doctor of Medicine (M.D.), and Master of Surgery (Ch.M.). The Degree of Ch.B. is not conferred on any person who does not at the same time obtain the Degree of M.B., and the Degree of M.B. is not conferred on any person who does not at the same time obtain the Degree of Ch.B.

[These Degrees admit to the Medical Register. They qualify for Practice throughout Her Majesty's dominions, and for admission to the Military, Naval, and other Public Medical Services in the United Kingdom.]

II. Subject to Regulations to be made from time to time by the University Court, the University may also confer Diplomas in Special Branches of Medical and Surgical Practice on Graduates of the University in Medicine and Surgery.

PRELIMINARY EXAMINATION.[1]

III. Before commencing medical studies, each student must pass a Preliminary Examination in (1) English, (2) Latin, (3) Elementary Mathematics, and (4) Greek or French or German: Provided always that, in the case of a candidate whose native language is not English, an examination in the native language of the candidate[2] may be substituted for one in either French or German, and an examination in any other classical language[2] for one in Latin or Greek.

IV. The extent and standard of the Preliminary Examination is determined by the Joint Board of Examiners constituted under Ordinance, No. 13 [General, No. 8 Regulations as to Examinations], in accordance with the terms of that Ordinance.

V. The Preliminary Examination is conducted in accordance with the provisions of Ordinance No. 13 [General, No. 8 Regulations as to

[1] See also pages 434 and 435.

[2] Candidates who propose to be examined in a language other than those above-named are required to give intimation thereof before 1st February or 1st July for the Examinations in spring and autumn respectively.

Examinations]; and, subject to the provisions of the immediately succeeding section hereof, a Candidate shall be obliged to pass in all the required subjects at one or not more than two Examinations; provided that he may offer himself for re-examination as often as may be necessary to satisfy this condition.

VI. A Degree in Arts, or in Science (not being a Degree *honoris causa* [*matter*]), in any of the Universities of the United Kingdom, or in any Colonial[1] or Foreign University specially recognised for the purpose by the University Court, exempts from the Preliminary Examination; and the Joint Board of Examiners appointed under the provisions of Ordinance, General, No. 8 [Regulations as to Examinations], has power to determine what examinations, other than those for the degrees hereinbefore mentioned, shall be accepted either in whole or in part in place of the Preliminary Examination.[2]

PROFESSIONAL EDUCATION.[3]

VII. Candidates are admitted to the Degrees of M.B. and Ch.B. only after they have fulfilled the following conditions:—

1. The Candidate must have been engaged in Medical study for at least five years.
2. In each of the first four years the Candidate must have attended at least two courses of instruction, in one or more of the subjects of study specified in sub-section 4 hereof—each Course extending over a session of not less than five months, either continuous or divided into two terms; or, alternatively, one such Course, along with two Courses, each extending over a session of not less than two and a half months.
3. During the fifth or final year the Candidate must be engaged in Clinical study for at least nine months at the Royal Infirmary, Edinburgh, or at one or more of such Public Hospitals or Dispensaries, British or Foreign, as may be recognised for the purpose by the University Court.
4. The Candidate must, during his Curriculum, have attended a Course or Courses of instruction in each of the following subjects of study, including such Examinations as may be prescribed in the various Classes, viz.:—

(1.) ANATOMY, ...	During a Course of not less than Five Months.

[1] University [illegible] in terms of this section: Princeton, New Jersey, U.S.A.

[2] See page 435.

[3] No Course of Lectures will be allowed to qualify unless the Lecturer certifies that it has embraced at least 150 Lectures, or 50 Lectures, in conformity with the requirements of this section. Three Months' Courses on Materia Medica and Pathology do not qualify. Three months' courses in Midwifery do not qualify unless they conform to Regulation [illegible], page [illegible]. Apprenticeship, Dispensary or Hospital Practice, Practical Midwifery, and Vaccination, &c., are not reckoned as *Classes* in making up an *Annus Medicus*.

(2.) PRACTICAL ANATOMY, ...	During two Courses of not less than Five Months each.[1]
(3.) CHEMISTRY, ...	During Courses of not less than Five Months.
(4.) MATERIA MEDICA and THERAPEUTICS, .	
(5.) PHYSIOLOGY or INSTITUTES OF MEDICINE,	
(6.) PRACTICE OF MEDICINE, . . .	
(7.) SURGERY, ...	
(8.) MIDWIFERY, and the DISEASES peculiar to WOMEN and INFANTS. Two Courses of Midwifery, of Three Months each, provided different departments of Obstetric Medicine be taught in each of the Courses, are reckoned equivalent to a Course of not less than Five Months, ...	
(9.) PATHOLOGY, ...	
(10.) PRACTICAL CHEMISTRY, ...	During Courses of not less than Two and a half Months.
(11.) PHYSICS (including the DYNAMICS OF SOLIDS, LIQUIDS, and GASES, and the RUDIMENTS OF SOUND, HEAT, LIGHT, and ELECTRICITY), ...	
(12.) ELEMENTARY BOTANY, ...	
(13.) ELEMENTARY ZOOLOGY, ...	
(14.) PRACTICAL PHYSIOLOGY, . . .	
(15.) PRACTICAL PATHOLOGY, . . .	
(16.) MEDICAL JURISPRUDENCE and PUBLIC HEALTH, ...	

Provided always in so far as regards the University of Edinburgh that—

(*a*) It is the duty of the Senatus to determine from time to time the number of meetings of which such Courses shall consist, and in what cases two half Courses shall be deemed equivalent to a full Course; and to report the determination to the University Court for its approval.

(*b*) It is the duty of the Professors and Lecturers to submit to the Senatus annually at the end of the Winter Session a scheme specifying what proportion of the Courses shall be devoted to Lectures, Practical Demonstrations, Examinations, and Tutorial Work respectively. The Senatus must transmit such scheme, with such observations as it may think fit to make thereon, to the University Court for its approval.

(*c*) The University Court will not grant or continue recognition to any institutions or teachers unless it is satisfied that their Courses of Instruction are equivalent to the Courses sanctioned in the Universities of Scotland.

[1] Certificates of attendance on Practical Anatomy must express not only the number of months engaged in dissection, but the names of the parts dissected, and the degree of care with which the dissections have been made. Students are recommended not to appear for Examination in Anatomy, with a view to a Degree, until they have dissected the human body at least once.

5. The Candidate must have attended for at least three years the Medical and Surgical Practice either of the Royal Infirmary, Edinburgh, or of a General Hospital elsewhere, which accommodates not fewer than eighty patients, and possesses a distinct staff of Physicians and Surgeons, and is recognised for the purpose by the University Court.

6. The Candidate must have attended Clinical Surgery[1] during a Course or Courses extending over not less than nine months. These Courses may be conducted by the Professor of Clinical Surgery, or by Professors or Lecturers appointed for the purpose by the University Court, or by the Ordinary Surgeons of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and must consist of regular instruction at the bedside, along with Clinical Lectures.

7. The Candidate must have attended Clinical Medicine[1] during a Course or Courses extending over not less than nine months. These Courses may be conducted by Professors of the University, or by Lecturers appointed for the purpose by the University Court, or by the Ordinary Physicians of the Royal Infirmary, Edinburgh, or of a General Hospital defined and recognised as hereinbefore provided, and must consist of regular instruction at the bedside, along with Clinical Lectures.

8. The Candidate must have attended a course of instruction in Mental Diseases, of such duration, and so apportioned between lectures, demonstrations, and clinical instruction, as the Senatus, with the approval of the University Court, may from time to time determine. [The course of instruction in Mental Diseases must have been given by the University Lecturer, or by a recognised Teacher, and must consist of not less than six Class-room meetings for lectures and demonstrations and ten meetings in the Wards of a recognised Asylum for the Insane.[2]]

9. The Candidate must have attended a Course of twenty-five meetings on Practical Pharmacy in a University or recognised School of Medicine, or have dispensed drugs for a period of three months in an Hospital or Dispensary, or the establishment of any chemist and druggist or pharmaceutical chemist of Great Britain, or any pharmaceutical chemist of Ireland, who is registered in the Books of the Pharmaceutical Society of Great Britain or of the Pharmaceutical Society of Ireland respectively.

10. The Candidate must have attended, for at least six months, by apprenticeship or otherwise, the out-practice of an Hospital, or the practice of a Dispensary, or of a Physician or Surgeon, or of a Member of the London or Dublin Society of Apothe-

[1] Only open to Students holding the Hospital Ticket. Certificates of attendance must be countersigned by the Treasurer of the Royal Infirmary. Attendance at these classes includes attendance at the Ward Cliniques as well as the Class Lectures.

[2] Must be attended before the Candidate enters for the Final Examination.

caries. He must have acted as Clerk[1] in the Medical and Dresser[1] in the Surgical Wards of a Public Hospital; and must also have availed himself, to such an extent as may be required by the Senatus, with the approval of the University Court, of opportunities of studying, at an Hospital or Dispensary, *post-mortem* Examinations, Fevers, Diseases of Children, Ophthalmology, or such other special departments as may from time to time be determined. [The approved courses are :—*A.* (1) Post-Mortem Examinations[2] in a recognised Hospital for a period of at least three months, during which practical instruction is given in the methods of making Post-Mortem Examinations, and in framing Reports.[3] (2) A course of Clinical instruction in infective Fevers, given at not less than twelve meetings in the Wards of a recognised Hospital where Clinical instruction is given on cases of Infectious Diseases.[3] (3) A course of instruction in Diseases of the Eye, given by the University Lecturer, or by a recognised Teacher, at not less than twelve Class-room meetings and twelve meetings for Clinical instruction in the Wards of a recognised Hospital, or in the Wards of a Hospital, and in a Dispensary, both recognised for the purpose. The Course to include efficient practical instruction in the methods of Examining the Eye.[3] (4) A Course of Operative Surgery, conducted by the Professor of Surgery in the University, or by a recognised Teacher. *B.* Every Candidate shall also be required to attend any one of the three following courses :—(1) A course of Clinical instruction in the Diseases of Children, given by the University Lecturers, and by recognised Teachers in the Edinburgh Royal Hospital for Sick Children, or by a recognised Teacher or Teachers in a Hospital recognised for the purpose, which shall extend over a period of at least six weeks, and in addition to the opportunities for Surgical and for other Medical instruction afforded by the Hospital, shall include Clinical instruction in the Medical diseases of children, consisting of not less than four Class-room lectures, ten meetings for Clinical instruction in the Medical Wards, and four meetings in the Out-patient Department of the Hospital,[2,3] together with attendance at Post-Mortem Examinations.[2,3] (2) A course of instruction in diseases of the Larynx, Ear, and Nose, given by a University Lecturer,[2,3] or by a recognised Teacher, at not less than six Class-room meetings, and twelve meetings for Clinical instruction in the Wards of a recognised Hospital, or in the Wards of a Hospital and in a Dispensary, both recognised for the purpose.[2,3] (3) A course of clinical instruction in diseases of the Skin, given by a University Lecturer, or by a recognised teacher, at not less than

[1] For six months. Must be members of the Class of Clinical Surgery, or of Clinical Medicine as the case may be. See also footnote 1, p. 356.

[2] See footnote 1, page 356. [3] See footnote 2, page 356.

Twenty meetings in the wards of a recognised Hospital, or in the wards of a Hospital and in a Dispensary both recognised for the purpose.[1] [2]

11. The Candidate must have attended, under the superintendence of a registered Medical Practitioner, twelve cases of labour, or such additional number as the Senatus, with the sanction of the University Court, may from time to time determine; or have attended for three months the practice of a Lying-in Hospital, or of the Maternity Department of a General Hospital or other Public Charitable Institution, and have conducted personally six, or such an additional number of cases of labour as the Senatus, with the approval of the University Court, may from time to time determine.
12. The Candidate must have been properly instructed in Vaccination at a Public Vaccination Station, by a Public Vaccinator, authorised by the proper Government Authority to grant Certificates of Proficiency in Vaccination.[3]
13. No Candidate for a degree will be deemed to have attended a class as part of the Curriculum necessary for that degree who does not present a certificate bearing not only that he has given regular attendance, but also that he has duly performed the work of the class.

VIII. With respect to the Places and Institutions at which the studies of the Candidate may be prosecuted, the following Regulations have effect:—

1. Two of the five years of medical study must be spent in the University of Edinburgh, each year of study including always the attendances specified in section VII., sub-section 2.
2. The remaining three years may be spent in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court, each year of study during the first four years including always the attendances specified in section VII., sub-section 2.[4]

[1] See footnote 1, page 356. [2] See footnote 2, page 356.

[3] The Candidate must, when he enters for the Final Examination, produce a certificate from a Vaccine Department in an Hospital, Dispensary, or other public Institution recognised by the Local Government Board for instruction in Vaccination, to the effect that he has himself performed the operation successfully under the teacher's inspection; that he is familiar with the different stages of the vaccine vesicle, and with the method of preserving lymph, and is thoroughly informed in every necessary part of the subject. The recognised Vaccine Departments in Edinburgh are the Royal Public Dispensary, 21 West Richmond Street—*Vaccinator*, Dr Husband; the Western Dispensary, 50 Fountainbridge—*Vaccinator*, Dr J. B. Buist; and the New Town Dispensary, 17 Thistle Street—*Vaccinator*, Dr Cadell.

[4] Universities, &c., recognised under this sub-section.—University College, Dundee, and Royal Infirmary, Dundee, and all Indian, Colonial, or foreign Universities whose Courses of Instruction were accepted for purposes of graduation in Medicine under the old Ordinances.

3. Of the subjects of study specified in section VII., sub-section 4, not less than eight must be taken in the University of Edinburgh, or (subject always to the provisions as to attendance contained in the immediately preceding sub-sections) in some other University of the United Kingdom, or in some Foreign or Colonial University entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court, or in a College incorporated with, or affiliated to a University, entitled to confer the Degree of Doctor of Medicine, recognised for the purpose by the University Court: Provided always that where in any of said subjects of study two or more Courses are required, the taking of one of those Courses will constitute a taking of the subject for the purpose of this sub-section.
4. The remainder of such subjects of study may (subject always as aforesaid) be taken in such Medical Schools or under such Teachers as may be recognised for the purpose by the University Court.
5. All Candidates, not Matriculated Students of the University, availing themselves of the permission to attend the Lectures of Extra-Academical Teachers in Edinburgh, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by Students of the University, and having, in respect of such payment, a right to the use of the Library of the University.
6. The Fee for attendance, for purposes of graduation, on the Courses of instruction of recognised Extra-Academical Teachers in Edinburgh, must be not less than the amount exigible for the corresponding Courses in the University.
   [*The fee must be paid at the commencement of the Course, and the Certificate must state the amount of the fee paid.*]
7. The University Court will not recognise as qualifying for examination in any of the subjects specified in section VII., sub-section 4, the class of any teacher who is at the time a teacher of more than one of the said subjects, except in those cases where Professors in the University are at liberty to teach the two subjects: Provided always that a Professor or other Teacher in any endowed public College or Institution, who, by the terms of his appointment, is required to teach more than one subject of Medical Study therein, may be recognised under sub-section 2 of this section as a Teacher of any one of the subjects which he teaches.
8. A Teacher, attendance on whose course of instruction, before the date of the approval of these Regulations by Her Majesty in Council, had been recognised for the purposes of graduation in the University, is not required to obtain a new recognition from the University Court; and attendance on the course of instruction of every such Teacher may continue to be recognised as heretofore.

9. It is in the power of the University Court, if it sees cause, at any time to withdraw or suspend any recognition which it may have granted.

IX. In the University of Edinburgh it is the duty of the Professors of the subjects specified in section VII., sub-section 4 hereof (except Practical Anatomy and such other subjects as the Senatus, with the approval of the University Court, may from time to time determine), so to conduct the Courses that Students may receive instruction sufficient for graduation in any one of the said subjects by attendance on one Course of five or six months, or of two and a half or three months as the case may be.

X. If any Candidate, before presenting himself for his Preliminary Examination, has attended in any University of the United Kingdom, or in any University or Institution specially approved, or under any Teacher specially recognised for the purpose by the University Court, a Course or Courses of instruction in Physics, Chemistry, Botany, or Zoology, equivalent in the judgment of the Senatus to the qualifying Course in the same subject in the University of Edinburgh, such attendance will (notwithstanding anything hereinbefore stipulated) be held as entitling him to be examined in these subjects; and if the Candidate has attended such Course or Courses in each of the said subjects, he will be held to have completed his first year of Medical Study: Provided always that the evidence of such attendance at such equivalent Course or Courses must be presented to the Senatus at the time when the Candidate presents himself for his Preliminary Examination; and the Senatus will, if satisfied, grant a certificate to that effect.

By a Supplementary Ordinance of the Commissioners, the provisions of this section shall not have effect except where the University Court shall allow the application after a report by the Senatus, setting forth special grounds therefor.

PROFESSIONAL EXAMINATION FOR M.B. AND Ch.B.

XI. Each Candidate is examined, both in writing and orally, and also clinically where the nature of the subject admits, in the following divisions, viz.:—*First*, in Botany, Zoology, Physics, and Chemistry; *Second*, in Anatomy, Physiology, and Materia Medica and Therapeutics; *Third*, in Pathology, and Medical Jurisprudence and Public Health; *Fourth*, in Surgery and Clinical Surgery, Practice of Medicine and Clinical Medicine, and Midwifery.

In subjects which admit of practical instruction, the examination will be such as to test the practical acquirements of the Candidate.

If a Candidate for the Degrees of M.B. and Ch.B. have completed, in a University of the United Kingdom, a course of study and passed an examination in Botany, Zoology, Physics, or Chemistry qualifying for a Degree in Science or in Arts, he shall be held to have passed the examinations in such subject or subjects.

If a Candidate have obtained a Degree in Science or in Arts in any

University other than a University of the United Kingdom, granted in either case after a course of study and an examination in Botany, Zoology, Physics, or Chemistry, it shall be in the power of the University Court to exempt such Candidate from the examinations in such subject or subjects; provided that the course of study and the standard of examination in each case are satisfactory in the judgment of the Senatus Academicus.[1]

XII. Candidates who profess themselves ready to submit to an examination in the subjects comprised in the first division, viz., Botany, Zoology, Physics, and Chemistry, may be admitted to examination in all or any two of these subjects at any examination held after they have attended a full Course in each of the subjects professed.

XIII. Candidates who have passed their examinations in the subjects comprised in the first division may be admitted to examination in the second division at the end of the third winter session.

Provided that Candidates who so desire may postpone their examination in Materia Medica and Therapeutics until the close of the summer session following.

XIV. Candidates who have passed their examinations in the subjects comprised in the first and second divisions may be admitted to examination in the third division at the end of the fourth winter session.

Provided that Candidates who so desire may postpone their examination in Medical Jurisprudence and Public Health until the close of the summer session following.

XV. Candidates who have passed their examinations in the subjects comprised in the first, second, and third divisions may be admitted to examination in the fourth or final division, when they have completed the fifth year of study.

XVI. If any Candidate at these examinations be found unqualified in one or more subjects, he will not again be admitted to examination unless he has pursued his medical studies for such time, and subject to such conditions, as the Faculty of Medicine may prescribe.[2]

XVII. If any Candidate at these examinations be found to have passed in one or more subjects with sufficient merit, he will not be liable to re-examination in such subject or subjects, although he may have been found unqualified in a subject or subjects comprised in the same division as hereinbefore specified.

XVIII. Every Candidate must deliver,[3] on or before such day as the Senatus may from time to time determine, to the Dean of the Faculty of Medicine, a declaration, in his own handwriting, that he has completed

[1] Universities recognised under this section—University of New Zealand and University of Wisconsin.

[2] Satisfactory Certificates must be produced when Candidates re-enter for Examination, the fees paid to Extra-Academical teachers in Edinburgh for re-attendances must be of the same amount as those payable for the corresponding classes in the University, and the Certificates of attendance must show the amount of the fees paid.

[3] On or before the date for lodging Certificates, &c., for the fourth division of the Examinations. See page 37. A declaration is appended to the Schedule for the Final Examination, which must be attested and signed before the Schedule is lodged.

his twenty-first year, or that he will have completed it on or before the day of graduation, and that he will not be, on the day of graduation, under articles of apprenticeship to any surgeon or other master.

XIX. After the Candidate has satisfied the Examiners, the Dean of the Faculty of Medicine lays the proceedings before the Senatus, by whose authority the Candidate will be admitted, on such day as the Senatus may from time to time appoint, to the Degrees of M.B. and Ch.B., on payment of the required fees.

XX. Candidates for graduation must produce evidence of their having conformed to the Regulations which were in force at the time they commenced their Medical Studies.

PROFESSIONAL EXAMINATION FOR M.D.[1]

XXI. 1. Subject to the conditions hereinafter specified, the Degree of M.D. is conferred on any Candidate who has obtained the Degrees of M.B. and Ch.B., and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to having received the Degrees of M.B. and Ch.B., for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in Practice other than Practice restricted to Surgery.

2. Each Candidate for the Degree of M.D. is required to pass an examination in Clinical Medicine and in such of its special departments as may from time to time be determined; and he may present himself for examination in Clinical Medicine at any period of examination subsequent to one year after he has received the Degrees of Bachelor of Medicine and Bachelor of Surgery.

This Examination in Clinical Medicine for each Candidate consists of a written Report and Commentary, with any oral questions that may be considered desirable, upon at least three Medical cases. In the selection of the cases, special regard should be given to the opportunities they afford for testing the Candidate, not only in the ordinary methods of clinical investigation, but also in the more advanced methods requiring practical knowledge in the applications of the ophthalmoscope and laryngoscope, in the chemical and microscopical examination of excreta, the quantitative determination and microscopic characters of the chief constituents of blood possessing clinical importance, the recording by instruments

[1] Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D. or for the Degree of Ch.M., but who cannot appear personally to receive the Degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the Degree conferred on them in absence.

of the condition of the circulation, the applications of electricity, &c. : Provided always that one of the three cases on which a Candidate shall be examined may be the case of a patient suffering from a Gynecological or Mental Disease, or Disease of Childhood, if the Candidate on entering his name for the Examination declare a wish to this effect. So far as possible, the Examination in these Departments will be on a standard equal to that of the Examination on the Medical cases.

3. Each Candidate for the Degree of M.D. must submit for the approval of the Faculty of Medicine a Thesis, on any branch of knowledge comprised in the second, third, or fourth examinations for the Degrees of M.B. and Ch.B., which he may have made a subject of study after having received those Degrees, excepting subjects which are exclusively Surgical ; and the Thesis, accompanied by a declaration signed by the Candidate, that the work has been done and the Thesis composed by himself, must be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.[1]

4. A Bachelor of Medicine and Bachelor of Surgery, who produces to the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to the examination in Clinical Medicine at any period of examination after he has received such Degrees ; but the Degree of M.D. will not be conferred on him unless he produces a certificate that, subsequently to having received the Degrees of M.B. and Ch.B., he has been engaged for at least one year in attendance in the Medical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively surgical, and unless his Thesis, in the judgment of the Faculty of Medicine, is of exceptional merit.

Bachelors of Medicine and Masters of Surgery of the University of Edinburgh, who have graduated under the regulations in force before 5th August 1892, may proceed to the Degree of Doctor of Medicine under the provisions of this section in the same manner as if they had graduated under the new Regulations.

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[1] Candidates are required to write their Theses on faint lined paper, 11 in. by 8½ in. with margins 1½ in. at each side. The Thesis is to be written on one side of each leaf only, and it must be lodged on or before 30th April of the year in which the Candidate proposes to graduate. See also footnotes, page 378.

PROFESSIONAL EXAMINATION FOR CH.M.[1]

XXII. 1. Subject to the conditions hereinafter specified the Degree of Ch.M. will be conferred on any Candidate who has obtained the Degrees of M.B. and Ch.B. of the University, and is of the age of twenty-four years or upwards, and has produced a certificate of having been engaged, subsequently to his having received the Degrees of M.B. and Ch.B., for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Military or Naval Medical Services, or for at least two years in practice other than practice restricted to Medicine.

2. Each Candidate for the Degree of Ch.M. is required to pass an examination in the following subjects:—Surgical Anatomy, Operations upon the dead body, and Clinical Surgery, and in such of the special departments of Clinical Surgery as may from time to time be determined; and he may present himself for examination in these subjects at any period of examination subsequent to one year after he has received the Degrees of M.B. and Ch.B.

The Examination in Clinical Surgery for the Degree of Master of Surgery should for each Candidate consist of a written Report and Commentary, with any oral questions that may be considered desirable, on at least three Surgical cases: Provided that one of the three Surgical cases on which a Candidate shall be examined may be the case of a patient suffering from an Eye, Throat, Ear, or Gynecological Disease, if the Candidate on entering his name for the Examination declare a wish to this effect. So far as possible, the Examination in these Departments shall be on a standard equal to that of the Examination on the Surgical cases. The Candidates shall also be examined in Surgical Anatomy and Operations upon the dead body.

3. Each Candidate for the Degree of Ch.M. must submit, for the approval of the Faculty of Medicine, a Thesis on any branch of knowledge comprised in the second, third, or fourth Examinations for the Degrees of M.B. and Ch.B., which he may have made a subject of study after having received those Degrees, excepting subjects that are exclusively medical; and the Thesis, accompanied by a declaration signed by the Candidate that the work has been done and the Thesis composed by himself, must be lodged with the Dean of the Faculty of Medicine on or before a date to be fixed by the Senatus.[2]

4. A Bachelor of Medicine and Bachelor of Surgery who produces to

[1] See footnote, page 362.
[2] See footnotes, pages 362, 363, and 378.

the Senatus satisfactory evidence of his intention of entering within twelve months after obtaining such Degrees on the practice of his profession in a British Possession or Colony, or in a foreign Country, may, under Regulations to be framed by the Senatus, be admitted to examination in the subjects specified in sub-section 2 of this section at any period of examination after he has received such Degrees; but the Degree of Ch.M. shall not be conferred on him unless he produces a certificate that, subsequently to having received the Degrees of M.B. and Ch.B., he has been engaged for at least one year in attendance in the Surgical Wards of an Hospital, or in scientific work bearing directly on his profession, such as is conducted in the Research Laboratories of the University, or in the Naval or Military Medical Services, or for at least two years in Practice which has not been exclusively medical, and unless his Thesis in the judgment of the Faculty of Medicine is of exceptional merit.

REGULATIONS FOR GRADUATION OF WOMEN.

1. It shall be in the power of the University Court to admit Women to graduation.

2. The conditions for graduation shall be the same for women as for men, subject to the following modifications, which shall have effect until provision is made for the instruction of women in all the subjects qualifying for graduation, in which provision is made for the instruction of men.

3. Section VIII. of Regulations for Degrees in Medicine shall not be applicable to the graduation of women in Medicine.

So long as within the Faculty provision is not made for the instruction of women in any subject qualifying for graduation in which provision is made for the instruction of men, it shall be in the power of the University Court to admit to graduation women who have received the requisite instruction in that subject in any University of the United Kingdom, or in any Indian, Colonial, or Foreign University recognised for the purpose by the University Court, or in such Medical Schools or under such teachers as may be recognised for the purpose by the University Court: Provided always that every Candidate for graduation shall produce evidence of having satisfied the conditions laid down in the Regulations for Degrees in Medicine with respect to the Preliminary Examination, and shall be examined in all the subjects necessary for graduation by the Examiners of the University.

4. So soon as within the University provision is made for the instruction of women in all subjects qualifying for graduation in which provision is made for the instruction of men, the conditions for the graduation of women shall be the same as the conditions for the graduation of men.

5. In the case of women who began their studies before these Regula-

tions came into operation, it shall be competent to the University Court to admit to graduation in Medicine women who may complete their medical studies in accordance either with the Regulations for graduation hitherto in force, or with the present Regulations; declaring that as regards their studies prior to the date at which these Regulations came into operation (1st October 1892), such women may have obtained their instruction in any classes which the University Court may accept for the purpose, and providing that before beginning their medical studies they shall have passed a Preliminary Examination which the University Court shall consider to have been adequate.

6. Women who attend classes in the University must matriculate, paying a fee of the same amount as that exigible for other students. Women, who are Candidates for graduation but not matriculated students, and who may attend classes in Edinburgh under the provisions above set forth, must, at the commencement of each year of such attendance, enrol their names in a book to be kept in the University for that purpose, paying a Fee of the same amount as the Matriculation Fee paid by students of the University [and having, in respect of such payment, a right to the use of the Library of the University].

Additional Regulations of the University Court.

When granting recognition to Medical Schools or Teachers for the medical instruction of women, the University Court requires that the classes shall not be mixed classes, except on special cause shown.

The University Court have recognised the Medical College for Women, 30 Chambers Street, Edinburgh, as a Medical School whose courses of instruction qualify for graduation in Medicine, subject to the following conditions:—Provided 1. That every Candidate for graduation shall produce evidence of having satisfied the conditions with respect to the Preliminary Examination and Registration as Medical Students, and shall be examined in all the subjects necessary for graduation by the Examiners of the University in which she takes her degree. 2. . . . 3. . . . 4. . . . 5. That the aforesaid School make application annually to the University Court for a continuation of the recognition thus granted, and at the same time report to the Court on the administrative arrangements and discipline of the School. 6. That schedules of Class Returns, to be furnished by the Court, and giving the designation of the class or course, number of students, number of meetings, &c., be filled up by each of the teachers of the qualifying classes or courses of instruction in the aforesaid Schools, as in the case of the recognised Lecturers on Medicine, and forwarded to the Secretary of the Court not later than 1st July in each year. 7. That all advertisements referring to the recognition of the aforesaid School, or to the qualifying classes or courses of instruction to be given at any time in connection with this School, shall, before publication, be submitted to the Secretary of Senatus of the University, and receive his approval.

DATES OF ENTERING FOR PRELIMINARY EXAMINATION AND FOR PAYMENT OF FEES.

Each Candidate is required to pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

Candidates for Examination may obtain Schedules at the Matriculation Office, University (Old) Buildings, on and after 8th September 1899, and on and after 15th February 1900. The Schedules must be completed and returned along with the fees not later than 19th September 1899 and 1st March 1900 for the autumn and spring Examinations respectively.

Candidates may pay the fees personally or transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts* crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, but not by cheques on private accounts. When names are not entered and Fees paid on or before the stated dates, an additional or late entry fee of 10s. must be paid before the Candidate can be admitted to Examination. A Candidate is not held to have entered until his Schedule is lodged, the Fee paid, and a Pass to the Examination obtained.

TIME-TABLE FOR PRELIMINARY EXAMINATIONS FOR 1899-1900.

		Medical Preliminary Examinations.	Arts and Science Preliminary Examinations.
1899.			
Sept. 30	Sat.	English, 9-12 Greek, 3-6 [2] Do., 3-5 [1]	English, 9-11, 12-2 Lower Greek, 3-6
Oct. 2	Mon.	Latin, 9-12 [2] Mathematics, 2-5 [2]	Lower Latin, 9-12 Lower Mathematics, 2-5
,, 3	Tu.	French, 3-6 Do., 3-5 [1]	Higher Latin, 9-11, 12-2 French, 1st paper, 3-4.30
,, 4	Wed.	German, 3-6 Do., 3-5 [1]	Higher Greek, 9-11, 12-2 German, 1st paper, 3-4.30
,, 5	Th.	Higher Mathematics, [1] 9-11, 12-2.	Intermediate and Higher Mathematics, 9-11, 12-2 French, 2nd paper, 3-5
,, 6	Fri.	Moral Philosophy, 9-11 [1] Mechanics, 1-4 [1 3]	German, 2nd paper, 9-11 Dynamics, 1-4
,, 7	Sat.	Natural Philosophy, 9-11 [1] Logic, 2-4 [1]	

[1] For Students completing the Examination under the Old Regulations.
[2] Same as the Lower Standard Paper for Degrees in Arts and Science.
[3] Paper same as in Dynamics for Degrees in Arts and Science.

		Medical Preliminary Examinations.	Arts and Science Preliminary Examinations.
1900.			
Mar. 24	Sat.	English, 9-12 Greek, 3-6 Do., 3-5[1]	English, 9-11, 12-2 Lower Greek, 3-6
,, 26	Mon.	Latin, 9-12 Mathematics, 2-5	Lower Latin, 9-12 Lower Mathematics, 2-5
,, 27	Tu.	French, 3-6 Do., 3-5[1]	Higher Latin, 9-11, 12-2 French, 1st paper, 3-4.30
,, 28	Wed.	German, 3-6 Do., 3-5[1]	Higher Greek, 9-11, 12-2 German, 1st paper, 3-4.30
,, 29	Th.	Higher Mathematics,[1] 9-11, 12-2	Intermediate and Higher Mathematics, 9-11, 12-2 French, 2nd paper, 3-5
,, 30	Fri.	Moral Philosophy, 9-11[1] Mechanics, 1-4[1 2]	German, 2nd paper, 9-11 Dynamics, 1-4
,, 31	Sat.	Natural Philosophy, 9-11[1] Logic, 2-4[1]	

[1] For Students completing the Examination under the Old Regulations.
[2] Paper same as in Dynamics for Degrees in Arts and Science.

MINIMUM CURRICULUM FOR DEGREES OF M.B. AND Ch.B., WITH SUGGESTED ORDER OF STUDY AND EXAMINATION.

Before beginning Medical Study, students must pass the Preliminary Examination in General Education, either at the University, or elsewhere, according to the requirements of the University. Immediately after entering on Medical Study, students must register in the books of one or other of the Registrars of the General Medical Council. The Registrar for Scotland is Mr James Robertson, 48 George Square, Edinburgh, from whom forms of Registration and all information on the subject may be obtained.

Medical Study may be begun either in October (Winter Session) or May (Summer Session), and must be engaged in for at least five years.

A.—*For Students beginning in Winter.*

FIRST WINTER SESSION.	
Chemistry, including Practical Chemistry. Physics,[1] or Elementary Zoology.	Anatomy (Lectures). *Examination in Chemistry, including Practical Chemistry, and either Physics or Elementary Zoology.*

[1] Three months' course.

FIRST SUMMER SESSION.
- Elementary Zoology or Physics.[1]
- Elementary Botany.
- *Examination in Elementary Botany and Elementary Zoology or Physics.*

SECOND WINTER SESSION.
- Practical Anatomy.
- Physiology.
- Surgery.

SECOND SUMMER SESSION.
- Practical Physiology.
- Practical Materia Medica.
- Clinical Surgery (with Dressership).
- Hospital.

THIRD WINTER SESSION.
- Materia Medica.
- Practical Anatomy.
- Clinical Surgery (with Dressership).
- Hospital.
- *Examination in Anatomy, Physiology, and Materia Medica and Therapeutics* (the last may be postponed to the end of the following summer).

THIRD SUMMER SESSION.
- Practical Pathology.
- Forensic Medicine and Public Health.
- Clinical Medicine.
- Hospital.
- *Examination in Materia Medica and Therapeutics* (if not previously taken).

FOURTH WINTER SESSION.
- Pathology.
- Medicine.
- Midwifery and Diseases of Women and Children.
- Clinical Medicine (with Clerkship).
- Hospital.
- *Examination in Pathology, and in Forensic Medicine and Public Health* (the latter may be postponed to the end of the following summer).

FOURTH SUMMER SESSION.
- *Examination in Forensic Medicine and Public Health* (if not previously taken).

FOURTH SUMMER AND FIFTH WINTER SESSION.
- Clinical Medicine.
- Clinical Surgery.
- Mental Diseases.
- Ophthalmology.
- Post-mortem Examinations.
- Operative Surgery.
- Fevers.
- Diseases of Children.
- Diseases of the Larynx, Ear, and Nose.
- Diseases of the Skin.
- Out-practice of an Hospital, Dispensary, &c.
- Midwifery Cases and Practice.
- Vaccination.
- Hospital.

FIFTH SUMMER SESSION.
- *Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery.*

B.—*For Students beginning in Summer.*

FIRST SUMMER SESSION.
- Elementary Botany.
- Elementary Physics.[1]
- *Examination in Elementary Botany and Physics.*

FIRST WINTER SESSION.
- Chemistry, including Practical Chemistry.
- Elementary Zoology.
- Anatomy (Lectures).

[1] Three months' course.

Examination in Chemistry, including Practical Chemistry and Elementary Zoology.

SECOND SUMMER SESSION.
- Practical Anatomy.
- Practical Physiology.

SECOND WINTER SESSION.
- Physiology.
- Surgery.
- Practical Anatomy.

THIRD SUMMER SESSION.
- Practical Anatomy.
- Practical Materia Medica.
- Clinical Surgery (with Dresser-ship).
- Hospital.

THIRD WINTER SESSION.
- Practical Anatomy.
- Materia Medica.
- Clinical Surgery (with Dresser-ship).
- Hospital.
- *Examination in Anatomy, Physiology, and Materia Medica and Therapeutics* (the last may be postponed to the end of the following summer).

FOURTH SUMMER SESSION.
- Practical Pathology.
- Forensic Medicine and Public Health.
- Clinical Medicine.
- Hospital.
- *Examination in Materia Medica and Therapeutics* (if not previously taken).

FOURTH WINTER SESSION.
- Pathology.
- Medicine.
- Midwifery and Diseases of Women and Children.
- Clinical Medicine (with Clerk-ship).
- Hospital.
- *Examination in Pathology, and Forensic Medicine and Public Health* (the latter may be postponed to the end of the following summer).

FIFTH SUMMER SESSION.
- *Examination in Forensic Medicine and Public Health* (if not previously taken).

FIFTH SUMMER AND FIFTH WINTER SESSION.
- Clinical Medicine.
- Clinical Surgery.
- Mental Diseases.
- Ophthalmology.
- Post-mortem Examinations.
- Operative Surgery.
- Fevers.
- Diseases of Children.
- Diseases of the Larynx Ear, and Nose.
- Diseases of the Skin.
- Out-Practice of an Hospital, Dispensary, &c.
- Midwifery Cases and Practice.
- Vaccination.
- Hospital.
- *Examination in Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery.*

REGULATIONS AS TO CLASS EXAMINATIONS.

With a view to promote the Educational interests of the students during the time they are occupied with the respective subjects in the Classes, the Senatus recommend : –

1. That there should be at least two Special Class-Examinations in

the Classes in the Faculty of Medicine during each Session, conducted by means of questions and written answers without aid from books or notes.

2. That in the event of a student gaining 75 per cent. or more of the available marks in any department, he shall obtain a Certificate in the First Class of Honours.

3. That in the event of a student gaining 50 per cent. or more, but less than 75 per cent., of the available marks in any department, he shall receive a Certificate in the Second Class of Honours.

University Bronze Medals are also given for Competitive Class Examinations.

CERTIFICATES OF ATTENDANCE ON CLASSES IN THE FACULTY OF MEDICINE.

The Senatus Academicus have resolved that the Certificates of Attendance to be granted to students in the Faculty of Medicine shall be regulated in the following manner :—

Each Professor shall ascertain the presence of his pupils at least twenty-six times in a Course of six months' duration, and thirteen times in a Course of three months' duration.

Those who have been absent twelve or more times in a six months' Course, or six or more times in a three months' Course, or have not duly performed the work of the Class, including any Examinations that may be held, shall not be entitled to any Certificate.

The following is the form of Certificate which must be adopted in all cases :—

"I certify that Mr attended my Course of Instruction on during the Session ; that he was present on of the occasions on which attendance was ascertained ; and that he duly performed the work of the class."

Exceptions will be admitted in the case of those who may be absent from sickness or other unavoidable causes, the particulars of which must be stated to the Professor in writing, accompanied with certificates. All excuses for non attendance must be given in immediately upon the student returning to his class. If any student shall have been absent for six weeks or upwards in a Course of six months, or for three weeks in a Course of three months (whatever the cause of absence may be), his case must be transmitted to the Dean of the Faculty for the decision of the Faculty.

Whenever the student's cause for absence shall be admitted by the Professor or by the Faculty, the Certificate shall bear that he "attended," and shall state the amount of the irregularity and the nature of the excuse.

FIRST PROFESSIONAL EXAMINATION.

The Faculty of Medicine have resolved that the written and oral examinations on Chemistry, Elementary Botany, Elementary Zoology, and Physics shall be restricted in the following manner :—

1. *Chemistry.*—Chemical changes as distinguished from physical changes. Elements; compounds; mixtures. Laws of chemical combination by weight and by volume. The atomic theory. Atoms; molecules. Avogadro's Hypothesis. Molecular weights of gaseous and volatile substances. Atomic weights. Law of Dulong and Petit. Chemical Notation—Symbols; formulæ; equations. Simple chemical calculations.

The non-metallic elements and their chief compounds; especially the compounds of oxygen, of hydrogen, and of chlorine with the other non-metals. The more important inorganic acids. The atmosphere. Combustion. Oxidation and reduction.

The following metallic elements and their chief compounds; especially those with oxygen, with chlorine, and with sulphur: Gold, platinum, silver, mercury, lead, antimony, tin, copper, bismuth, zinc, iron, aluminium, chromium, manganese, barium, strontium, calcium, magnesium, potassium, sodium.

The following salts: the ammonium salts; the more important sulphates, sulphites, thiosulphates, nitrates, nitrites, carbonates, bromides, iodides, iodates, phosphates, borates, silicates.

The relations of bases, acids, and salts. Electrolysis. Quantivalence. The periodic law.

The metallurgy of silver, mercury, copper, lead, tin, zinc, iron (including cast-iron and steel). Alloys, such as brass, bronze, solder, type-metal. Amalgams.

The manufacture of aluminium, magnesium, potassium, sodium, glass, porcelain, mortar, gunpowder, sulphuric acid, sodium carbonate and bicarbonate, caustic soda, bleaching powder and chlorates, white lead.

Classification of Carbon Compounds. Marsh Gas and its Homologues. Chloroform. Methyl and Ethyl Alcohols and Ethers. Substituted ammonias and ammonium salts. Formic and Acetic Acids, Aldehyde, Acetone, Chloral, Olefiant Gas, Acetylene, Oxalic Acid, Lactic Acid. Tartaric Acid, Citric Acid. Fats and Oils, Saponification, Glycerine. Cellulose, Sugars, Starch. Distillation of Wood and of Coal. Benzene, Benzoic Acid, Phenol, Salicylic Acid, Oil of Bitter Almonds. Hydrocyanic Acid, Cyanides, Cyanates, Thiocyanates, Urea, Uric Acid.

Simple Qualitative Analysis. The examination in this is conducted practically. Candidates are required to examine unknown *single salts* for both metallic and salt radicals, as contained in the following lists :—

Silver, Mercurous, Mercuric, Cupric, Lead, Stannous, Stannic, Bis-

muth, Antimony (*Tartar Emetic* may be given), Arsenious, Zinc, Manganous, Ferrous, Ferric, Chromic, Aluminium, Calcium, Barium, Strontium, Magnesium, Ammonium, Sodium, Potassium.

Carbonate, Sulphite, Thiosulphate, Sulphide, Hypochlorite (Bleaching solution), Nitrite, Chloride, Bromide, Iodide, Cyanide, Sulphate, Chromate, Orthophosphate, Arseniate, Arsenite, Borate, Oxalate, Nitrate, Chlorate, Acetate.

At the examination, Candidates are supplied with the following reagents, &c.: Acetic Acid, dilute Hydrochloric Acid, dilute Nitric Acid, Sulphuric Acid, dilute Sulphuric Acid, Alcohol, Iodine, Ammonia, Ammonium Carbonate, Ammonium Chloride, Ammonium Oxalate, Ammonium Sulphide, Barium Nitrate, Bleaching Powder, Calcium Chloride, Calcium Hydrate, Calcium Sulphate, Cobaltous Nitrate, Cupric Sulphate, Ferric Chloride, Ferrous Sulphate, Lead Acetate, Magnesium Sulphate, Mercuric Chloride, Potassium Carbonate, Potassium Chromate, Potassium Ferricyanide, Potassium Ferrocyanide, Potassium Hydrate, Potassium Iodide, Silver Nitrate, Sodium Bitartrate, Sodium Phosphate, Sodium Sulphite, Stannous Chloride, Sulphuretted Hydrogen. *Solids*—Manganese Dioxide, Sodium Carbonate, Borax, Sulphur, Zinc, Copper.

Test papers:—Blue Litmus, Red Litmus, Plain, Starch, Turmeric.

Bunsen Burner, Test Tubes.

2. *Elementary Botany.*—The characteristic features of the following groups and classes of the vegetable kingdom:—

Thallophyta [Schizophyta, Algæ, Fungi]; Muscineæ [Hepaticæ, Musci]; Pteridophyta [Filicineæ, Equisetineæ, Lycopodineæ]; Phanerogamæ [Gymnospermæ, Angiospermæ (Monocotyledones, Dicotyledones)].

The fundamental facts and principles of Morphology (including Anatomy, Histology, and Development) and Physiology. The characters of plants belonging to the following natural orders of Phanerogamæ:—Coniferæ, Gramineæ, Orchideæ, Liliaceæ, Urticaceæ, Labiatæ, Compositæ, Umbelliferæ, Rosaceæ, Leguminosæ, Cruciferæ, Ranunculaceæ.

3. *Elementary Zoology.* (*a*) The General Principles of Biology.

(*b*) The distinctive characters of the Invertebrate groups, and the structure, habits, &c., of Amœba, Paramœcium, Hydra, Arenicola, Hirudo, Anodon, Helix, Nephrops, and Periplaneta.

(*c*) The distinctive characters of the Chordata groups, and the structure, habits, &c., of Myxine, Raia, Rana, Columba, Ornithorhynchus, Macropus, Lepus, Ovis, and Canis.

(*d*) The skeletons of Crocodilus, Equus, Felis (skull only), Balæna, Vespertilio, and Troglodytes.

(*e*) A general knowledge of the orders of Mammalia.

(*f*) The life-histories of Gregarina, Distoma, Tænia, Ascaris, Trichina, and Filaria.

(*g*) The outlines of the development of Amphioxus, Scyllium, and Rana, and of the fœtal appendages of Gallus and Lepus.

(*d*) The principles of the Geographical Distribution of Animals, and the Distribution of the Mammalia.

4. *Physics.*—(*a*) Properties of Matter—including Inertia, Gravitation, Molecular Forces, &c.

(*b*) Abstract Dynamics—including Kinematics and Newton's Laws of Motion, with their consequences as regards Statics and Kinetics of Solid, Liquid, and Gaseous Bodies, with the Physical Measurement of Time.

(*c*) Sound and Wave-propagation in general, Intensity, Pitch and Quality of Musical Sounds, Harmonics, Concords, &c.

(*d*) Heat, its Nature, Effects, Measurement, Transference and Transformations—Measurement of Temperature and of absolute Temperature, Thermodynamics.

(*e*) Light (1), Geometrical Optics, Speed of Light, Laws of Reflection and Refraction, Construction and Effects of Mirrors, Prisms, Lenses, and Microscopes, Images, Conditions of Distinct Vision. (2) Physical Optics—Interference, Dispersion, Diffraction, Double Refraction, Polarisation, Spectrum Analysis.

(*f*) Electricity, including Frictional and Voltaic Electricity, Thermo- and Magneto-Electricity, Electro-Dynamics and Magnetism, with their practical applications. Measurements of Potential, Electromotive Force, Current, &c., Batteries, Dynamos, Electrometers, Galvanometers, Voltameters, &c.

HONOURS AT PROFESSIONAL EXAMINATIONS.

Candidates who have displayed special merit at any of the Professional Examinations will be announced as having passed that Examination "with distinction."

Candidates who have displayed special merit at each of the Professional Examinations will be announced, at the time of the Graduation, as having obtained FIRST or SECOND CLASS HONOURS, according to the merit that has been displayed.

SPONSIO ACADEMICA FOR GRADUATES IN MEDICINE.

Ego Doctoratus in Arte Medica titulo jam donandus, sancte coram Deo cordium scrutatore, spondeo, me in omni grati animi officio erga Universitatem Academicam Edinburgensem ad extremum vitæ halitum perseveraturum.

Tum porro Artem Medicam caute, caste, probeque exercitaturum, et quoad potero, omnia ad ægrotorum corporum salutem conducentia cum fide procuraturum. Quæ, denique, inter medendum visa vel audita silere conveniat, non sine gravi causa vulgaturum.

Ita præsens spondenti adsit Numen.

FEES FOR EXAMINATIONS.

FEES FOR M.B. AND CH.B.

Fee for the First Division of the Examination, viz., Botany, Zoology, Physics, and Chemistry . .			£6 6 0
or			
For any two of the subjects . .	£3 3 0		
For the other two subjects . .	3 3 0		
For the Second Division, viz., Anatomy, Physiology, and Materia Medica and Therapeutics . . .			6 6 0
or			
For Anatomy and Physiology . .	£4 4 0		
For Materia Medica and Therapeutics	2 2 0		
For the Third Division, viz., Pathology, and Forensic Medicine and Public Health			4 4 0
For the Final Division, viz., Surgery and Clinical Surgery, Medicine and Clinical Medicine, and Midwifery			6 6 0
			£23 2 0

Any Candidate who fails to pass in one or more of the subjects, must pay £1, 1s. for re-examination in each subject.

Candidates who, under the proviso in Section XI. of the Regulations, are exempted from the first division of the Examination, are required, after passing the final division of the Examination, to pay a fee of £6, 6s. before they can be admitted to the Degrees of M.B. and Ch.B.

Fee for M.D.	£10 10 0
Fee for Ch.M.	£10 10 0

Any Candidate who fails to pass the Examinations for the Degree of M.D. or for the Degree of Ch.M., is required to pay a Fee of £5, 5s. for each re-appearance.

Every Candidate for Examination or Graduation must be a Matriculated Student of the year in which he appears for Examination or Graduation. He is also required before Graduation to pay the fee of £1 for Registration as a Member of the General Council, if not already a Member.

TIME-TABLES OF EXAMINATIONS.

Candidates are required to enter for each periodical Professional Examination at which they desire to appear, and to state the subject or subjects in which they desire to be examined.

The dates of the Examinations for 1899-1900 have been fixed as follows, and Candidates are required to assemble in the Examination Hall at the University a quarter of an hour before the time fixed for examination.

PRELIMINARY EXAMINATION.

See Time-Table and Dates of Entering, &c., pages 367 and 368.

PROFESSIONAL EXAMINATIONS.

Candidates are required to enter their names and to pay the fees for the Examinations at the Matriculation Office, University (Old) Buildings, at the stated periods; and afterwards, at the stated periods, to exhibit their Certificates and Matriculation Cards at that Office. Certificates only will be received as evidence of attendance.

If names are not entered, Fees paid, and Certificates shown, or Theses lodged, on or before the stated dates (or a Pass obtained in the case of the fee having been previously paid), a late-entry fee of ten shillings must be paid before the Candidate can be admitted to any one of the Four Professional Examinations for M.B., or to the Professional Examinations for M.D. or Ch.M. Candidates may enter on payment of this fee till 4 P.M. on the third day previous to the commencement of the respective Examinations. Thereafter a late-entry fee of twenty shillings will be charged till twelve noon of the day preceding the commencement of any one of the Professional Examinations. No later entry will be received.

Candidates for M.D. and for Ch.M. whose Theses are not lodged by the appointed time (30th April), are not eligible for competition for medals or other awards.

First Professional Examination.

This Examination takes place in March and July. Candidates may be admitted to Examination in all or in any two subjects, after they have attended a full course in each of the subjects professed.

1900.

Mar.	6.	Tu.	Names to be given in, and Fees paid, *on or before* this date.
,,	23.	Fri.	Certificates to be examined from 10 to 3.
,,	24.	Sat.	Practical Chemistry Examination begins at hours to be announced (also on subsequent days if necessary).
			Written Examinations.[1]
,,	26.	Mon.	Chemistry at 10 o'clock; Physics at 1 o'clock.
,,	27.	Tu.	Zoology at 10 o'clock; Botany at 1 o'clock.
July	6.	Fri.	Names to be given in, and Fees paid *on or before* this date.
,,	19.	Thur.	Certificates to be examined from 10 to 3.
,,	21.	Sat.	Practical Chemistry Examination begins at hours to be announced (also on subsequent days if necessary).

[1] Lists for the Oral Examinations will be posted immediately after the respective Written Examinations.

1900. *Written Examinations.*[1]

July 23. Mon. Chemistry at 10 o'clock; Physics at 1 o'clock.
,, 24. Tu. Zoology at 10 o'clock; Botany at 1 o'clock.

Second Professional Examination.

This Examination takes place in March and July. Candidates who have passed the First Examination may be admitted to this Examination at the end of their Third Winter Session.

Mar. 12. Mon. Names to be given in, and Fees paid *on or before* this date.
,, 24. Sat. Certificates to be examined from 9 to 2.

Written Examinations.[1]

,, 28. Wed. Anatomy at 10 o'clock; Physiology at 1 o'clock.
,, 29. Thur. Materia Medica and Therapeutics at 10 o'clock.

Candidates may postpone their Examination in Materia Medica and Therapeutics until the close of the Summer Session following.

July 12. Thur. Names to be given in, and Fees paid *on or before* this date.
,, 18. Wed. Certificates to be examined from 9 to 2.

Written Examination.[1]

,, 20. Fri. Anatomy at 10 o'clock; Physiology at 1 o'clock.
,, 21. Sat. Materia Medica and Therapeutics at 10 o'clock.

Third Professional Examination.

This Examination takes place in March and July, and Candidates who have passed the Second Examination may be admitted to this Examination at the end of their Fourth Winter Session.

Mar. 16. Fri. Names to be given in, and Fees paid *on or before* this date.
,, 29. Thur. Certificates to be examined from 10 to 3.

Written Examinations.[1]

,, 30. Fri. Pathology at 10 o'clock; Forensic Medicine and Public Health at 1 o'clock.

Candidates may postpone their Examination in Forensic Medicine and Public Health until the close of the Summer Session following.

July 17. Tu. Names to be given in and Fees paid *on or before* this date.
,, 24. Tues. Certificates to be examined from 10 to 3.

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[1] See footnote, page 376.

1900. *Written Examination.*[1]

July 25. Wed. Pathology at 10 o'clock; Forensic Medicine and Public Health at 1 o'clock.

Fourth or Final Professional Examination.

This Examination takes place in May and June, and may be taken when the Candidate has passed the Third Examination, and has completed his Fifth year of Medical Study.

April 18. Wed. Names to be given in and Fees paid *on or before* this date.

,, 19. Thur. } Certificates to be examined from 10 to 1.
,, 20. Fri. }

Written Examinations.[1]

May 1. Tu. Clinical Medicine Examination begins.
June 18. Mon. Medicine at 10 o'clock; Midwifery at 1 o'clock.
,, 19. Tu. Surgery at 10 o'clock.
,, 20. Wed. Clinical Surgery Examination begins.

Degree of Doctor of Medicine.[2]

April 30. Theses to be lodged, Certificates shown, and Fees paid *on or before* this date.

Written Examinations.[1]

June 22. Fri. Names to be entered and Fees paid by Candidates for Clinical Examination only *on or before* this date.
July 6. Fri. Clinical Medicine Examination begins at 9.45 A.M.

Degree of Master of Surgery.[2]

April 30. Theses to be lodged, Certificates shown, and Fees paid *on or before* this date.

Written Examinations.[1]

June 22. Fri. Names to be entered and Fees paid by Candidates for Clinical Examination only *on or before* this date.
July 6. Fri. Surgical Anatomy. Operations on the dead body. Clinical Surgery Examinations begin.

[1] See footnote 1, page 376.

[2] If Theses and Certificates are not lodged, or fees not paid, on or before the dates specified, a late entry fee of £1 will be charged. See also Regulations as to entering for Examinations, page 376.

Degree of D.Sc.

1899.
Dec. 1. Fri. Theses to be lodged, Certificates shown, and Fees paid *on or before* this date.

1900.
July 18. Wed. Names to be given in for Graduation, and the Registration Fee (if not previously registered) paid *on or before* this date.

,, 28. Sat. Graduation Ceremonial at 10 A.M. Graduands to assemble at 8.45 A.M.

Information relative to Matriculation and the Curriculum of Study, and the Subjects of Examinations for Degrees in Medicine and Surgery, and for Fellowships, Scholarships, Bursaries, Prizes, &c., &c., may be obtained on application to the Dean of the Faculty of Medicine, University New Buildings.

The fee for Matriculation, for Examinations for Degrees, and for Registration as Member of the General Council of the University, are payable at the *Matriculation Office*, *University* (*Old*) *Buildings*. Candidates may pay the fees personally, or transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed "*Union Bank of Scotland* (*Hunter Square Branch*), *Edinburgh*," but not by cheques on private accounts. A Candidate is not held to be entered until his schedule is lodged, the fee paid, and a pass to the Examination obtained.

EXTRA-ACADEMICAL TEACHERS.

Regulations of the University Court relative to Certificates of Attendance.

The Certificate of Attendance granted to Students by recognised Extra-Academical Teachers, should, in all cases, state the number of Lectures, or of Meetings for Practical Instruction, in the Course; the number of occasions on which attendance was ascertained; and the number of those occasions on which the Student was present, and in what further respects he duly performed the work of the class. The Certificate should also state the general scope of the Course; and, in particular, in the case of *Chemistry*, that the Course included Organic as well as Inorganic Chemistry; in the case of *Midwifery*, that it included the Diseases of Women and Children; and, in the case of *Practical Materia Medica*, that it included Pharmacognosy, Pharmacy, Dispensing, and the writing of Prescriptions.

EXTRA ACADEMICAL TEACHERS, WHOSE LECTURES QUALIFY FOR GRADUATION IN THIS UNIVERSITY.

(*See preceding paragraph.*)

ABERYSTWYTH.

		Date of Recognition.
I. Ainsworth Davis, M.A.	Natural History,	28 July 1886.
D. Morgan Lewis	Physics,	16 July 1894.
J. H. Salter, B.Sc.	Botany,	30 Oct. 1893.
H. Lloyd Snape, D.Sc.	Chemistry & Practical Chemistry,	19 March 1888.
James J. Dobbie, D.Sc.,	Chemistry & Practical Chemistry,	30 May 1885.

BANGOR.

		Date of Recognition.
Andrew Gray,	Physics,	26 Oct. 1892.
Reginald W. Phillips, M.A.,	Botany,	30 May 1885.
Philip J. White, M.B.,	Natural History,	9 Dec. 1889.

BELFAST.

R. O. Cunningham, M.D.,	Zoology,	18 Feb. 1895.

BIRMINGHAM.

F. J. Allen, M.A.,	Physiology & Practical Physiology,	12 Dec. 1887.
T. W. Bridge, M.A.,	Zoology,	9 July 1883.
Percy F. Frankland, Ph.D.,	Chemistry & Practical Chemistry,	16 July 1894.
W. Hillhouse, M.A.,	Botany,	26 Nov. 1883.
J. H. Poynting, D.Sc.,	Physics,	12 June 1893.
Bertram C. A. Windle, M.D.,	Anatomy,	17 Nov. 1884. 29 Oct. 1888.

CARDIFF.

A. Francis Dixon, M.B.,	Anatomy & Practical Anatomy,	18 July 1898.
John Berry Haycraft, M.D.,	Physiology,	16 July 1894.
J. V. Jones, M.A., B.Sc.,	Physics,	16 July 1894.
W. N. Parker, Ph.D.,	Natural History,	28 July 1886.
Arthur L. Selby, M.A.,	Physics,	21 Oct. 1895.
Claud M. Thompson, M.A., D.Sc.,	Chemistry & Practical Chemistry,	28 July 1886.
(*Lecture Course may be divided between two consecutive Sessions.*)		
A. H. Trow, B.Sc.,	Botany,	16 July 1894.

CORK.

		Date of Recognition.
J. J. Charles, M.D., D.Sc.,	Physiology,	18 Feb. 1895.
(*Qualifying Course to embrace "Ordinary Course" and Course for Senior Students.*)		
Marcus Hartog, M.D., D.Sc.,	Zoology,	18 Mar. 1895.

DUBLIN.

A. C. Haddon, M.A.,	Natural History,	23 Jan. 1888.
Chs. R. C. Tichborne, Ph.D.,	Practical Chemistry,	28 Feb. 1881.

EDINBURGH.

A. P. Aitken, D.Sc.,	Chemistry & Practical Chemistry,	29 Oct. 1888.
J. O. Affleck, M.D.,	Practice of Physic,	8 Dec. 1879.
J. W. Ballantyne,	Midwifery,	13 Dec. 1897.
R. J. A. Berry, M.D.,	Anatomy,	14 Dec. 1896.
Byrom Bramwell, M.D.,	Practice of Physic,	18 Oct. 1880.
Alexander Bruce, M.D.,	Pathology & Practical Pathology,	24 January 1887.
A. G. Bruce,	Practical Materia Medica,	18 June 1894.
Francis M. Caird, M.B., C.M.,	Surgery,	13 August 1886.
Wm. Craig, M.D.,	Materia Medica & Prac. Materia Med.	14 July 1879.
T. W. Drinkwater, Ph.D.	Chemistry and	8 March 1880.
	Practical Chemistry,	14 July 1879.
William Duncan,	Prac. Materia Med.,	12 April 1886.
R. A. Fleming, M.A., M.D.	Medicine,	13 Dec. 1897.
E. S. Fry, M.B.,	Practical Materia Medica,	21 Oct. 1895.
George A. Gibson, M.D.,	Practice of Physic,	9 Dec. 1889.
A. Lockhart Gillespie, M.D.,	Materia Medica,	25 Oct. 1897.
David Berry Hart, M.D.,	Midwifery,	22 Oct. 1894.
F. W. N. Haultain, M.D.,	Midwifery,	15 June 1891.
J. W. B. Hodsdon, M.D.,	Surgery,	3 August 1888.
John Hunter, F.I.C., &c.,	Chemistry & Practical Chemistry,	22 Oct. 1894.
Alex. James, M.D.,	Practice of Physic,	3 August 1888.
Alexander Johnstone,	Botany,	26 Oct. 1892.
J. Falconer King, F.C.S.,	Chemistry & Practical Chemistry,	12 Nov. 1894.
R. F. C. Leith, M.B., B.Sc.,	Pathology,	26 Oct. 1892.
	Prac. Pathology,	13 June 1892.
Harvey Littlejohn, M.D.,	Medical Jurisprudence,	17 May 1897.

EDINBURGH—*continued.*		*Date of Recognition*
Stevenson Macadam, Ph.D.,	Chemistry & Practical Chemistry,	before 1861.
W. Ivison Macadam, F.R.S.E.	Chemistry & Practical Chemistry,	23 July 1888.
A. N. M'Alpine, B.Sc.,	Botany,	8 March 1880.
George Mackay, M.D.,	Ophthalmology,	13 July 1896.
J. S. M'Laren, M.B.,	Surgery,	26 Oct. 1892.
John Macpherson, M.D.,	Mental Diseases,	13 Feb. 1899.
Alexander Miles, M.D.,	Anatomy and Practical Anatomy,	12 Feb. 1894.
R. Milne Murray, M.B.,	Midwifery,	13 August 1886.
D. Noel Paton, M.D.,	Physiology and	24 Oct. 1887.
	Prac. Physiology,	19 March 1888.
R. W. Philip, M.D.,	Medicine,	16 July 1894.
J. B. Readman, D.Sc.,	Practical Chemistry,	17 Dec. 1888.
W. G. Aitchison Robertson, M.D.	Public Health,	10 April 1897.
William Russell, M.D.,	Pathology & Practical Pathology,	6 August 1887.
Alexis Thomson, M.D.,	Surgery,	30 Oct. 1893.
John Macpherson, M.D.,	Mental Diseases,	13 July 1896.
James Adam Terras, B.Sc.,	Botany,	12 Dec. 1898.
R. Turnbull, B.Sc.,	Botany,	18 Feb. 1895.
Dawson F. D. Turner, M.D.,	Physics,	20 March 1893.
David Wallace, M.B.,	Surgery,	14 Dec. 1896.
J. R. Whitaker, M.B.,	Anatomy,	16 July 1894.
William Wood, M.B.,	Prac. Materia Med.,	15 June 1893.

GLASGOW.

John Barlow, M.D.,	Physiology,	26 Nov. 1883.
	Prac. Physiology,	8 January 1890.
D. Campbell Black, M.D.,	Physiology,	15 July 1895.
A. M. Buchanan, M.D.,	Anatomy and Practical Anatomy,	12 Oct. 1874.
R. M. Buchanan, M.D.,	Medical Jurisprudence,	13 July 1896.
H. E. Clark, M.D.,	Surgery,	12 Feb. 1894.
James Dunlop, M.D.,	Surgery,	12 Oct. 1874.
John Edgar, M.D., B.Sc.,	Midwifery,	14 Dec. 1896.
Samson Gemmell, M.D.,	Practice of Physic,	18 July 1881.
R. Barclay Ness, M.A., M.B.,	Materia Medica & Prac. Materia Med.	16 Dec. 1895.
Alex. Robertson, M.D.,	Practice of Physic,	15 June 1891.
John Lindsay Steven, M.D.,	Pathology & Practical Pathology,	10 April 1893.

GLASGOW—*continued.*		*Date of Recognition.*
W. Ernest F. Thomson,	Physiology & Practical Physiology,	13 Feb. 1899.

LONDON.

H. E. Armstrong, Ph.D., F.R.S.,	Chemistry,	25 Oct. 1897.
W. E. Ayrton, F.R.S., (Lecturers in the City Guilds of London Institute.)	Physics,	25 Oct. 1897.
(*Courses to include First and Second Years of Study.*)		
G. B. Howes,	Natural History,	18 July 1887.

NOTTINGHAM.

J. W. Carr, M.A.,	Botany,	16 Jan. 1893.
Frank Clowes, D.Sc.,	Chemistry & Practical Chemistry,	9 Dec. 1889.

SHEFFIELD.

Christopher Addison, M.D.,	Anatomy,	12 Dec. 1898.
C. F. Myers Ward.	Physiology	16 Jan. 1899.
W. Carlton Williams, B.Sc.,	Chemistry & Practical Chemistry,	26 Nov. 1883.

B.—ABRIDGED REGULATIONS FOR GRADUATION IN MEDICINE AND SURGERY, APPLICABLE TO ALL WHO COMMENCED THEIR MEDICAL STUDIES BEFORE 1ST OCTOBER 1892.

For full Regulations see CALENDAR *for* 1898-99 *or previous* CALENDARS.

Three Degrees are conferred—viz., Bachelor of Medicine (M.B.), Master in Surgery (C.M.), and Doctor of Medicine (M.D.).

DEGREES OF BACHELOR OF MEDICINE AND MASTER IN SURGERY (M.B., C.M.).

Preliminary Examination.[1]

The preliminary subjects of examination are English, Latin, Arithmetic, the Elements of Mathematics, and the Elements of Mechanics; and any two of Greek, French, German, Higher Mathematics, Natural Philosophy, Logic, Moral Philosophy, as prescribed on page 385 hereof. The examinations in English, Latin, Arithmetic, and Mathematics, are the same as in English, Latin, and Mathematics (which includes Arithmetic) for M.B.,

[1] The Dean of the Faculty will give information regarding examinations which exempt from the Preliminary Examination; and see also CALENDAR for 1892-93, and previous CALENDARS, for examinations which exempt.

Ch.B.; and the examination in Mechanics is the same as that in Dynamics in the Arts and Science Preliminary Examinations.

See Time-Table of Examinations, Dates of Entering and Payment of Fees, &c., pp. 367 *and* 368.

Professional Education.—The chief differences between the Old and New Regulations are:—Candidates for Graduation under the Old Regulations are not required to attend courses on Physics, Mental Diseases, Diseases of the Eye, Diseases of Children, or Diseases of the Larynx, Ear, and Nose, Clinical Instruction in Fevers, Post-Mortem Examinations, Diseases of the Skin, and Clerking and Dressing in a Public Hospital. In Practical Anatomy they are only required to attend a five months' course; In Clinical Medicine and Clinical Surgery one course of five months, or two courses of three months each, and Hospital attendance for twenty-four months.

Professional Examinations.—The only differences are:—Candidates under the Old Regulations are not examined in Physics in the First Professional Examination. The Regulations for entering for the First and Second Professional Examinations, and for payment of Fees are the same as for M.B., Ch.B.[1] The Examinations in Pathology are held at the same time as the Examinations in that subject for M.B., Ch.B.; *but the regulations for entering and payment of Fees are as for the Second Professional Examination.* The examination in Forensic Medicine is held in *Spring only* at the same time as the examination in that subject for the Third Professional Examination for M.B., Ch.B. The examinations in the other subjects of the Final Examination take place at the same time as in the corresponding subjects for M.B., Ch.B.; *but Candidates under the Old Regulations are required to enter their names, and pay the Fees for the Final Examination on or before 20th March; and Certificates will be examined on 29th March, from* 10 *to* 3. See Time Tables of Examinations, pp. 376-378.

Otherwise the Regulations are the same as for M.B., Ch.B.

For further information apply to the Dean of the Faculty.

Optional Preliminary Subjects of Examination under the Old Regulations for Bachelors of Medicine and Masters in Surgery (M.B., C.M.) who intend to proceed to the Degree of Doctor of Medicine, and for those who commenced the Study of Medicine by attendance on Medical Classes before 1st *October* 1892, *for Autumn* 1899 *to Spring* 1901 *inclusively.*

[1] See Time Tables, and dates of entering for the examinations and payment of fees, pages 375-378.

Each Candidate is required to pay a fee of 10s. 6d. for each appearance at the Preliminary Examination.

1. GREEK.—Xenophon, *Cyropaedic*, Book VI. Some easy sentences of English will be set to be translated into Greek.

2. FRENCH.—Alphonse Daudet's *Le petit Chose, première partie* (Hachette & Co.). An easy passage in English will be given for translation into French.

3. GERMAN.—Homann, *Deutsche Märchen*, Nos. 8-14. An easy passage in English will be given for translation into German.

4. HIGHER MATHEMATICS.—Same as Higher Mathematics for the Preliminary Examination for the Degree of M.A.

5. NATURAL PHILOSOPHY.—(1) Properties of matter—Elasticity, Density, Porosity, Capillarity, &c. (2) Elementary phenomena of Sound, Light, Heat, Electricity, and Magnetism. Text-Books recommended—Balfour Stewart's *Elementary Physics*, and Tait's *Properties of Matter*.

6. LOGIC.—The Elements of Deductive and Inductive Logic, as in Jevons's Elementary Lessons.

7. MORAL PHILOSOPHY. — Professor Seth's *Ethical Principles*, Introduction and Part I.

DEGREE OF DOCTOR OF MEDICINE.

For fees, dates of entering, etc., see page 386.

XVII. The Degree of DOCTOR OF MEDICINE may be conferred on any candidate who has obtained the Degrees of Bachelor of Medicine and Master in Surgery, and is of the age of twenty-four years, and produced a certificate of having been engaged subsequently to his having received the Degrees of Bachelor of Medicine and Master in Surgery, for at least two years in attendance on an Hospital, or in the Military or Naval Medical Services, or in Medical and Surgical Practice:

Provided always that the Degree of Doctor of Medicine shall not be conferred on any person, unless he be a Graduate in Arts of one of the Universities of England, Scotland, or Ireland, or of such other Universities as have been specially recognised for that purpose, or unless he shall, before or at the time of his obtaining the Degrees of Bachelor of Medicine and Master in Surgery, or thereafter, have passed a satisfactory examination on *three* of the optional Preliminary Subjects of Examination above mentioned. Two of these must be Greek, and either Logic or Moral Philosophy, and the third must be one of the following subjects at the option of the Candidate—namely, French, German, Higher Mathematics, and Natural Philosophy.

And provided also that the candidate for the Degree of Doctor

of Medicine shall submit to the Faculty of Medicine a Thesis, certified by him to have been composed by himself, and which shall be approved by the Faculty, on any branch of knowledge comprised in the professional examinations for the Degrees of Bachelor of Medicine and Master in Surgery, which he may have made a subject of study after having received those Degrees. The Candidate must lodge his Thesis with the Dean on or before 30th April of the year in which he proposes to graduate. No Thesis will be approved by the Medical Faculty which does not contain either the results of original observations in practical Medicine, Surgery, Midwifery, or in some of the sciences embraced in the curriculum for the Bachelor's and Master's Degrees; or else a full digest and critical exposition of the opinions and researches of others on the subject selected by the Candidate, accompanied by precise references to the publications quoted, so that due verification may be facilitated.[1]

Candidates, settled for a period of years in foreign parts, who have complied with all the regulations for the Degree of M.D., but who cannot appear personally to receive the Degree, may, on satisfying the Senatus to that effect, by production of sufficient official testimonials, have the Degree conferred on them in absence.

FEES FOR DEGREES, &c.

Examination in Botany, Chemistry, Chemical Testing, Natural History,	£5	5	0
Examination in Anatomy, Institutes of Medicine, Materia Medica, Prescriptions, Pathology,	5	5	0
Final Examination in Surgery, Midwifery, Practice of Physic, Forensic Medicine and Public Health, Clinical Medicine (with Prescriptions), Clinical Surgery, during last Summer Session,	10	10	0
Total Fees for M.B. and C.M. Diplomas,	£21	0	0
Fee for M.D.,	£5	5	0
Matriculation Fee,	1	1	0

In the event of the Candidate failing to pass any one of the Professional Examinations, the Fee is not returned; but he may appear at one subsequent examination without paying an extra Fee, and at any future examination on paying a Fee of £2, 12s. 6d.

April 30. Theses to be given in, Certificates shown, and Fees paid *on or before* this date.

[1] Candidates are required to write their Theses on faint lined paper, 11 in. by 8½ in. with margins 1½ in. at each side. The Thesis is to be written on one side of each leaf only.

July 18. Wed. Names to be given in for Graduation *on or before* this date.[1]

.. 28. Sat. GRADUATION CEREMONIAL at 10 A.M. Graduands are required to assemble at 8.45 A.M.

REGULATIONS FOR SPECIAL STUDY AND RESEARCH, AND FOR THE APPOINTMENT OF RESEARCH FELLOWS.

I. The Senatus Academicus, with the approval of the University Court, may make regulations under which Graduates of Scottish Universities or of other Universities recognised by the University Court for the purposes hereof, or other persons who have given satisfactory proof of general education and of fitness to engage in some special study or research, may be admitted to prosecute such study or research in the University.

II. It is the duty of the Senatus (1) To receive and decide upon all applications for admission to prosecute special study or research. (2) To prepare a list of all persons so admitted (hereinafter referred to as Research Students). (3) To make regulations for the supervision of their work. (4) To satisfy themselves from time to time that the Research Students are carrying on their work in the University in a satisfactory manner. (5) To suspend or exclude from any course any student whose conduct or progress is unsatisfactory.

III. Every applicant for admission must send in to the Senatus a written application stating any degree or other distinction which he has already obtained, the line of study or research which he wishes to prosecute and the probable period of its duration, together with evidence as to his character, capacity, and general qualifications.

IV. Any application for admission shall be in the first instance referred by the Senatus to the appropriate Faculty, or to a Committee appointed by the Senatus; one member of the Committee shall always be a Professor or Lecturer within whose department the proposed line of study or research falls. No applicant shall be recommended by the Faculty or the Committee who has not satisfied them by examination or otherwise that he is qualified to prosecute the proposed line of study or research, and further—

(*a*) That his proposed line of study or research is a fit and proper one; (*b*) That he possesses a good general education; (*c*) That he is of good character; (*d*) That he proposes to prosecute his studies or research during a period to be approved by the Senatus Academicus.

The Faculty or the Committee shall make a report to the Senatus upon each application. It shall also be their duty, subject to the regulations of the Senatus, to provide for the supervision of the Research Student's work, and to report at least once a year to the Senatus as

[1] If Theses and Certificates are not lodged, or fees not paid, on or before the dates certified, a late-entry fee of 10*s.* will be charged. See also Regulations as to entering for Examinations, page 376.

to his progress and conduct. The Senatus shall then determine whether he shall remain a Research Student.

V. Every Research Student shall be required to matriculate each year, paying the ordinary fee.

VI. Research Students shall have access to and the use of the University Laboratories and Museums, under such conditions as to payment and otherwise as the University Court, after consultation with the Senatus, may determine.

VII. The title of Research Fellow may be conferred by the Senatus, with the approval of the University Court, on Research Students who have shown special distinction. Such title shall not of itself confer any right to stipend, but it shall be in the power of the University Court to provide a stipend of such amount and for such period as it may think fit to any Research Fellow under the powers of Section XI., Sub-section 8, of Ordinance 27.

VIII. (1) The Research Fellows shall be appointed as aforesaid after consideration of the report or reports submitted in terms of Section IV. hereof. (2) The title of Research Fellow may be conferred either at the commencement of the Research Student's course of study or research, or at any time during its progress, as the Senatus Academicus may determine. (3) Research Fellows shall retain their title and stipend, if any, for the period during which they are engaged in special study or research in the University, and no longer. (4) Research Students who have been appointed Research Fellows shall continue to be subject to the conditions above prescribed as to the supervision of their work and the reports to be made thereon.

IX. Nothing herein contained shall prejudice the right of Research Students to such Fellowships, Scholarships, or Prizes as may be open to them by Ordinance or Deed of Foundation.

X. The University Court may, subject to the provisions of Section XI., Sub-section 8, of Ordinance No. 27, Edinburgh No. 6, provide such sums as it may think fit in aid of the expenses of Special Study or Research.

Regulations for the Degree of D.Sc.

. . . . . .

I. Research Students within the meaning of the Regulations for the Encouragement of Special Study and Research and for the appointment of Research Fellows, may offer themselves for the degree of D.Sc. of the University in which they have prosecuted some special study or research under those Regulations, although they have not taken the degree of B.Sc. or the degree of M.A. with honours in that University; provided—

(1) That they hold the degree of B.Sc. or M.B. of a Scottish or any recognised University, or a degree of any such University, which the Senatus shall hold to be equivalent to the

degree of B.Sc. or to the degree of M.A. with first or second class honours in Mathematics and Natural Philosophy; provided that Candidates who hold any such degree from a University outside the United Kingdom may be required, if the Senatus think fit, before beginning their course as Research Students with a view to the degree of D.Sc., to pass an examination equivalent to an Honours or to a Final Science examination in a group of subjects cognate to their line of work as Research Students.

(2) That they have spent not less than two winter sessions or an equivalent period as Research Students in the University granting the degree, and that they produce evidence of satisfactory progress in the special study or research undertaken by them during that period.

(3) That a period of not less than five years shall have elapsed from the date of the graduation required in sub-section (1) of this section.

II. All Candidates for the degree of D.Sc. shall present a thesis or a published memoir or work, to be approved by the Senatus on the recommendation of the Faculty of Science; provided that, if required by the Senatus, the Candidate shall also be bound to pass such an examination conducted orally or practically, or by written papers, or by all of these methods, on the subjects of his special study or of his thesis, as may from time to time be determined. The thesis shall be a record of original research undertaken by the Candidate, and shall be accompanied by a declaration signed by him that the work has been done and the thesis composed by himself. [The Thesis must be lodged and the fees paid on or before 1st December.]

III. Notwithstanding and in supplement of the provisions of Regulations as to Examinations, sections XIV. and XV., the Senatus shall appoint such Professors or Lecturers as it may think suitable to conduct the examination of Candidates who may offer themselves under the provisions of the Regulations for Degrees in Science, or of these Regulations for the Degree of D.Sc., and the University Court shall, after consultation with the Senatus Academicus, appoint an additional Examiner to act along with them. Such additional Examiner shall be a person of recognised eminence in the subject of the thesis, or memoir, or work which is to be submitted for approval. The result of the examination shall be reported to the appropriate Faculty or Committee of Senatus.

. . . . . .

V. The degree of D.Sc. shall in no case be conferred on persons who have not satisfied the conditions hereinbefore set forth, and shall not be conferred *honoris causa tantum*.

VI. The fee for the Examination for the Degree of D.Sc. is ten guineas, payable when the Candidate lodges his thesis. Fee for re-examination, £5, 5s.

DOCTORS OF MEDICINE

WHO HAVE BEEN AWARDED GOLD MEDALS FOR THEIR THESES FROM 1889 TO 1898 INCLUSIVELY.[1]

1889.

Herbert H. Ashdown, England
John W. Ballantyne, Scotland
Arthur J. M'D. Bentley, England
Kenneth M. Douglas, Scotland
Thomas A. Helme, England
Henry Alexis Thomson, Scotland
Joseph Tillie, Scotland
Herbert F. Waterhouse, England

1890.

Joseph Griffiths, Wales
Robert Muir, Scotland
George Edmund Pierez, Ceylon
W. G. A. Robertson, Scotland
Arthur Robinson, England
John David Williams, Wales

1891.

Edmund W. W. Carlier, England
Vaughan Berkeley Harley, England
David Hepburn, Scotland
Alexander Miles, Scotland
James Ritchie, Scotland
George Neil Stewart, Scotland
John Clarence Webster, Canada

1892.

George Sandison Brock, Scotland
Alex. Lockhart Gillespie, Scotland
William Aldren Turner, Scotland
Arthur John Whiting, England
Theodore Stacey Wilson, England

1893.

Francis Darby Boyd, Scotland
James Samuel Risien Russell, Demerara
James Lorrain Smith, Scotland
John Cleasby Taylor, England
William Ernest Francis Thomson, Scotland

1894.

Lewis Campbell Bruce, Scotland
William Menzies Hutton, Scotland
Gustav Mann, India
James Acworth Menzies, Scotland
John Douglas Stanley, Ireland

1895.

Frank Leigh Ehrke, England
Wilfred Vincent Miller Koch, Ceylon
James Ritchie, Scotland
Andrew Walker, Scotland

1896.

Robert Swan Aitchison, Scotland
William Elder, Scotland
Robert Alexander Fleming, Scotland
Claude Buchanan Ker, England
John Macpherson, Scotland
Thomas Hugh Milroy, Scotland
George Robert Wilson, Scotland

1897.

Friedrich Wilhelm Eurich, M.D., Saxony
William Edward Fothergill, M.D., England
Thomas Alexander Wemyss Fulton, M.D., Scotland
David Arthur Welsh, M.D., Scotland

1898.

Andrew Balfour, M.D.
Alexander Corsar Sturrock, M.D.

[1] The names of those who received Gold Medals prior to 1859 will be found in the List of Graduates in Medicine of the University of Edinburgh since its foundation, published in 1867, and the names of those who received Gold Medals from 1859 to 1888, both years inclusive, will be found in the Historical Appendix to List of Graduates, published in 1889, pp. 128, 129.

DOCTORS OF MEDICINE WHO GRADUATED ON 30TH JULY 1898, WITH THE TITLES OF THEIR THESES.

*** *Obtained Gold Medals for their Dissertations.*

** *Deemed worthy of competing for Gold Medals.*

* *Commended for their Dissertations.*

Hugh de Maine Alexander, Scotland, M.B., C.M., 1896. Some Clinical Observations on the Insane.

* Andrew Balfour, Scotland, M.B., C.M., 1894. The Toxicity of the Dye Stuffs, with special reference to their effects upon the Public Health, and to River Polution.

Henry Bateson, England, M.B., C.M., 1894. Observations on the influence of occupation on the health of the Coal Miner.

Robert Stuart Bennie (M.A.), Scotland, M.B., C.M., 1896. Hæmoglobinuria.

5 Arthur Birt, England, M.B., C.M., 1887. Thomsen's Disease (Congenital Myotonia).

Hight Blundell, England, M.B., C.M., 1891. The Etiology of Narcomania or Inebriety.

Alexander John Campbell (M.A.), Scotland, M.B., C.M., 1894. Abdominal Pain: its Causation and Significance.

Alexander Keith Campbell, Scotland, M.B., C.M. (with Second-Class Honours), 1894. The relation of Heredity and Physical Disease to Insanity: a Study based on the certified cases of Mental Disease admitted to James Murray's Royal Asylum, Perth, for a period of Ten Years, 1887-96.

Sidney Herbert Carr, England, M.B., C.M., 1895. The Etiology of the Summer Diarrhœa of Children.

10 Henry Oakley Corfield, England, M.B., C.M., 1893. Influenza.

Edgar Nicholas Darwent, America, M.B., C.M., 1886. Yellow Fever: a Clinical Study.

Walter Denby, England, M.B., C.M., 1887. Anthrax, considered chiefly in relation to the Woolsorters of Bradford.

Mohan Lal Dhingra, India, M.B., C.M., 1896. Some of the more important facts relating to the cause and prevention of Indian Cholera.

Ernest Ralph Dodds, England, M.B., C.M., 1894. A Case of Puerperal Fever due to mixed infection by Diphtheria Bacilli and Streptococci, and its treatment by the Specific Antitoxic and Antimicrobic Serums.

15* Henry Aylmer Dumat, Mauritius, M.B., C.M., 1882. An Investigation into the medicinal properties of the Water Cress, which enjoys

a popular reputation as a remedy against Rheumatism, Gout, and Scurvy.

George Henry Dupont, England, M.B., C.M. (with Second-Class Honours), 1893. Broncho-Pneumonia in Children.

* William Frederick Farquharson, Scotland, M.B., C.M. (with First-Class Honours), 1889. Heredity in relation to Mental Diseases.

* Frederick Walter Foxcroft, England, M.B., C.M., 1891. Suppuration of the Accessory Cavities of the Nose.

* Alexandra Mary Campbell Geddes, Scotland, M.B., C.M., 1896. A Year's Obstetric Work at Plaistow Maternity Institute, London. Statistics and notes on fifteen hundred and fifty Cases, with Observations on cases of Chorea Gravidarum, Extra Uterine Gestation, Rupture of the Uterus, and Inversion of the Uterus.

20 Charles John Gibson, England, M.B., C.M., 1880. On the forms of Progressive Anæmia.

Wilfrid Glegg, Scotland, M.B., C.M., 1895. Bridge of Allan: its Climate and Waters.

* Casimiro Joaquim Gomes, Demerara, M.B., C.M., 1891. Anchylostoma Duodenale.

* Alexander Charles Edward Gray, Scotland, M.B., C.M., 1890. Chorea Minor, with a table of fifty Cases.

Thomas Paul Gray, Scotland, M.B., C.M., 1886. The association of Optic Neuritis and Atrophy, with diseases of the Brain and Spinal Cord.

25* Herbert Melvill Green, England, M.B., C.M., 1894. Infant Feeding.

Frederick Harwood Hardman, England, M.B., C.M., 1894. A Full Digest and Critical Exposition of the Syphilitic Diseases of the Eye and its Appendages, with some original observations.

* John Wesley Hart, New South Wales, M.B., C.M., 1890. Tænia Echinococcus.

* John Francis Haswell, England, M.B., C.M., 1886. The Etiology of Endemic Goitre.

** Charles Monro Hector, New Zealand, M.B., C.M., 1895. The Surface Tension and Viscosity of Urines.

30* Donald Henry Hutchinson, England, M.B., C.M., 1896. The Serum Diagnosis of Typhoid Fever.

* Dugald Shaw Johnston, Scotland, M.B., C.M., 1893. Puerperal Septicæmia.

* Henry Breckenridge Knox, Port au Prince, M.B., C.M., 1891. The Outbreak of Yellow Fever in Jamaica, 1897-98: a Consideration of the Cause of its introduction and diffusion among the Inhabitants. Some points of

interest relating to Immunity and Incubation. The Symptoms, Signs, and Treatment.

* Hamilton Graham Langwill, Scotland, M.B., C.M. (with First-Class Honours), 1889, Hyperpyrexia in Rheumatism, considered chiefly from a Clinical Standpoint.

David Lawson (M.A.), Scotland, M.B., C.M., 1895. The Toxæmic Theory of Albuminuria Gravidarum.

35 Ian Macdonald, Scotland, M.B., C.M., 1895. The Treatment of Superficial Burns by Picric Acid Solution: a Study in Repair.

* Cecil John Read Macfadden, Ireland, M.B., C.M., 1894. Spasmodic Asthma, with special reference to that variety induced by the Emanations of Animals.

Henry Moncrieff MacGill, Scotland, M.B., C.M., 1891. Account of an outbreak of Typhoid Fever due to Milk Contamination.

Wakefield MacGill, Scotland, M.B., C.M., 1891. Puerperal Eclampsia, with Cases.

Alexander Gray M'Intyre, Scotland, M.B., C.M., 1893. A Case of Spontaneous Rupture of the Heart, with its Pathological Appearances.

40** George M'Kellar, Scotland, M.B., C.M., 1896. The Bacteriology of Vaccinia and Vaccine Lymph, with a Study of the Accidents which complicate Vaccination, and the relation of Micro-organisms thereto, and of the effect of various chemical substances on Vaccine Lymph.

* Frederick Lumsden Mackenzie, Scotland, M.B., C.M., 1885. Puerperal Eclampsia, with notes of five cases and one case of Non-puerperal Convulsions.

* William Hector Mackenzie, Scotland, M.B., C.M., 1894. The use of Opium in the treatment of Melancholia.

* David Melville, Scotland, M.B., C.M., 1892. Rinderpest: its Pathology, Symptoms, Etiology, and Treatment.

* James Middlemass (M.A., B.Sc.), Scotland, M.B., C.M. (with Second-Class Honours), 1888. The Treatment of Insanity by Thyroid Extract.

45 Frederick Hughes Morison, England, M.B., C.M., 1887. Observations on diseases of the Chest in ten years of General Practice.

Robert Owen Morris (M.A.), Wales, M.B., C.M., 1894. Dilatation of the Stomach.

* Charles Frederick Arrowsmith Moss, England, M.B., C.M., 1888. Clinical Illustrations of Ectopic Pregnancy.

Percy Wood Nicol, Scotland, M.B., C.M., 1892. The

Addition of Preservatives to Milk and Butter.

* Percy Athelstan Nightingale, Cape Colony, M.B., C.M., 1890. Beri-Beri: a Clinical Study.

50 Glenmore Ozanne, Guernsey, M.B., C.M., 1885. Experience in the way Dysentery is spread in British Guiana.

William Peart-Thomas, England, M.B., C.M., 1891. The Clinical Significance of an excess of Indican in the Urine.

Joseph Aldric Perez, Trinidad, M.B., C.M., 1886. Ainhum: a Disease of Tropical Countries.

George Philips, England, M.B., C.M., 1893. Typhoid Fever in Children.

* William Alexander Potts (B.A.), England, M.B., C.M., 1895. Traumatic Delirium.

55 Leonard Nicholas Robinson, England, M.B., C.M., 1893. The Treatment of Locomotor Ataxia.

* Walter Sansom, England, M.B., C.M., 1890. Disorders of the Vermiform Appendix.

* James Scott, Scotland, M.B., C.M., 1894. Pulmonary Tuberculosis: a Study of recent researches in Immunity, with special reference to Pulmonary Tuberculosis. Observations of numerous Cases: Suggestions as to Treatment and Prevention.

William Somerville, Scotland, M.B., C.M., 1892. Albuminuria as it occurs in Scarlet Fever.

* Frederick Naylor Stewart, Scotland, M.B., C.M., 1889. Friedrich's Ataxia.

60***Alexander Corsar Sturrock (M.A.), Scotland, M.B., C.M. (with First-Class Honours), 1896. The Selective Power of Tissues, especially as illustrated in the Mammary Gland.

William Smith Syme, Newfoundland, M.B., C.M., 1891. Pseudo-hypertrophic Muscular Paralysis, with Notes of a Case.

David Thomas (M.A.), Scotland, M.B., C.M., 1893. Acute Rheumatism in Children, including its relation to Chorea.

* Henry Torrance Thomson, Scotland, M.B., C.M., 1892. Migraine.

* Henry Stanley Walker, England, M.B., C.M., 1891. Ulcer of the Stomach.

65 James Rodger Watson (M.A., B.Sc.), Scotland, M.B., C.M. (with Second-Class Honours), 1895. Antistreptococcus Serum as a Prophylactic and Curative Agent, with special reference to its use in the treatment of Diffuse Cellulitis.

Robert Henry Watson (M.A.), Scotland, M.B., C.M., 1893. Splenic Anæmia.

James Watt (B.A.), New Zealand, M.B., C.M., 1895. On the structure of Boltenia Pachydermatina (New Zealand).

** Gilbert Aitken Welsh, Scotland, M.B., C.M., 1896. A Clinical Study of points bearing upon the Etiology and Course of some forms of Syphilitic Insanity, with eight cases.

John Wilkinson, Ireland, M.B., C.M., 1886. Clinical Bacteriology.

70 John William Williams, New Zealand, M.B., C.M., 1891. The Type of Malarial Fever prevalent in the Western Pacific Islands.

** John Brown Yeoman, Scotland, M.B., C.M. (with Second-Class Honours), 1893. The Morphology of the Carpus and the Tarsus.

Bachelors of Medicine and Masters in Surgery (M.B., C.M.) who have Passed the Examinations with Honours from 1889 to 1898, both years included. [1]

1889.

Class I.

Robert Oswald Adamson (M.A.), Scotland
John William Crerar, Scotland
William Fred. Farquharson, Scot.
James Lackie, Scotland
Jas. Hill Williamson Laing (M.A., B.Sc.), Scotland
Hamilton Graham Langwill, Scot.
Alexander Maclean, Scotland
Eustace G. Pilgrim, Barbados
Wm. Gordon Woodrow Sanders, Scotland
James Andrew Thyne, Scotland
George Wilkinson, England

Class II.

Robert Dunlop Reid Allison, Scot.
William Everett, England
George Alfred Walter, England
Colin Gordon, England
Ewan John Maclean, Wales
James Monteith, Scotland
Benjamin Sweeten, Scotland
C. N. C. Wimberley, Scotland

1890.

Class I.

Charles James Whitehead Dixon, England
Carstairs Cumming Douglas, Scot.
Gerald Fitzgerald, Scotland
Robert Main Horne, Scotland
Colin Forbes Lees, Scotland
William Paterson, Scotland
George William Thompson, La Plata
William Kerr Walker, Scotland

Class II.

Ed. H. Alexander, New Zealand
Robert Brown, Scotland
John Wheeler Dowden, Ireland
George Balfour Marshall, Scotland
Arnold W. Williams, England

1891.

Class I.

John Wardle Bone, England
Wm. Blackley Drummond, Scot.
George Elder, Scotland
Edward Barnard Fuller, Africa
Henry Baker Hall, England
George Henman, Scotland
Herbert Saunders Wansbrough Jones (B.Sc.), Wales
Harry Rainy (M.A.), Scotland

Class II.

Robt. J. Ashton (B.A.), England
Robert Cran, Scotland

[1] For names of those who received the Degrees with Honours prior to 1889, see Historical Appendix to List of Graduates of the University, published in 1889, pp. 129-132.

Friedrich Wilhelm Finsch, Saxony
David J. Mackenzie (M.A.), Scot.
John Orr, Scotland
David Stuart, Scotland
Wm. J. Walker (B.A.), Australia
Neish Park Watt (M.A.), Scotland
John Thos. Wilson, Tasmania

1892.

Class I.

Alexander Brownlie, Scotland
Charles Cromhall Easterbrook, (M.A.), England
George Home, New Zealand
Lim Boon Keng, Singapore
Robert Murray Leslie (M.A., B.Sc.), Scotland
Donald Macaulay (M.A.), Scot.

Class II.

Alexander Douglas (M.A.), Eng.
Daniel Charles Edington, Scot.
John James Evans, Wales
Arthur Fells, England
James Stewart Fowler, Scotland
Robert Walker Gray, Scotland
Robert John Johnston, Scotland
Geo. Wm. F. Macnaughton, Scot.
Philip Oscar Malabre, Jamaica
Peter William Shaw, Scotland
Alfred George Talbot (B.A.), New Zealand
George Templeton, Scotland

1893.

Class I.

Charles Crerar, Scotland
John Buchanan Duff, Scotland
Alex. M. Easterbrook, Scotland
Wm. E. Fothergill (M.A., B.Sc.), England
Robert Hutchison, Scotland
Robert H. Makgill, Scotland
Jas. V. Paterson, M.A., Scotland
David W. Sutherland, Australia
Hugh Walker (M.A.), Scotland
D. A. Welsh (M.A.), Scotland

Class II.

William Randolph Center, Scot.
Robert Craig Dun, Scotland
George Harry Dupont, England
Charles Alfred Hogg, Tasmania
Charles Kerr, Scotland
James G. Macnaughton, Scotland
W. M'D. Selby, Scotland
St John Stanwell, England
John Steed, England
John Tennant (M.A.), Scotland
John Brown Yeoman, Scotland

1894.

Class I.

James Martin Beattie (M.A.), New Zealand
Evan John Hewat Fraser, England
George Brooke French, England
Thomas Gibson (M.A.), Ireland
John Rutherford Gilmour, Scotland
Neil MacVicar, Scotland
William Anderson Stephen (M.A.), Scotland
James Purves Stewart (M.A.), Scotland

Class II.

Robert William Beesley, England
Robert Ward Briggs, England
Alexander Keith Campbell, Scot.
Thomas H. C. Derham, England
Charles Francis Lassalle, W. Indies
James Donald Macrae, Scotland
Hezlett Hamilton Marshall, Australia
Arthur Maxwell Nicholson Pringle, Scotland
Walter Russell Strapp, Natal

1895.

Class I.

Joseph Edward Bowes, England
John Forbes (M.A.), Scotland
William John Garbutt, England
Rhodes Haygarth, England
Andrew Robertson Wilson (M.A.), Scotland
William De Wever Wishart, British Guiana

Class II.

James Gray, Scotland
Albert Lewis Husband, England
Robert MacWilliam Leith, Cape Colony
William Lillie, India
David Rankine (M.A.), Scotland
David Waterston (M.A.), Scotland
James Rodger Watson (M.A., B.Sc.), Scotland

1896.

Class I.

William Haining Carse, Scotland
John Eason, Scotland
Percy James Henderson, Scotland
Percy Theodore Herring, England
John George Patrick Murray, England
Alexander Corsar Sturrock (M.A.), Scotland

Class II.

John Thomas Hewetson, England
Alexander Petrie Lowe, Scotland
Arthur David Yule, Scotland

1897.

Class I.

Harold Sherman Ballantyne (B.Sc.), Scotland
William Frederic Harvey (M.A.), India
George Carmichael Low (M.A.), Scotland
Edwin Matthew (M.A.), Scotland

Class II.

William Finlay (Bach.-ès-Lett.), Scotland
James Graham, Scotland
Evan Harries Jones, Wales
Leslie Kingsford, New Zealand
Andrew Hutton Watt, Scotland

1898.

Class II.

Charles Chilton (M.A., D.Sc.), New Zealand
William Henry Dawson (M.A., B.Sc.), New Zealand

BACHELORS OF MEDICINE AND BACHELORS OF SURGERY (M.B., Ch.B.), WHO HAVE PASSED THE EXAMINATIONS WITH HONOURS, 1897.

1897.

Class I.

Charles Miner Cooper, England
John Smith Fraser, Scotland
William Hamilton, England
James Duncan Slight (M.A.), Scotland

Class II.

Bertram Cecil Robert Aldren, England
Theodore Robert William Armour, Scotland
John Malcolm, Scotland
John William Struthers, Scotland

1898.

Class I.

William Neish Barker, Scotland
Archibald Currie M'Gilchrist (M.A.), Scotland
John Henry Rhodes, England
Alfred Charles Sandstein, New Zealand
Robert Frederick M'Nair Scott (B.A.), Scotland
Donald Bremner Waters (M.A.), Scotland

Class II.

William Bell, England
Stanley Branch, West Indies
John Cameron (B.Sc.), Scotland
George Dick, Scotland
Robert James Dick, Scotland
Duncan Forbes, Scotland
George Edwin James King, England
Henry Wade, Scotland

Bachelors of Medicine and Masters in Surgery (M.B., C.M.).

29th January 1898.

John Tarrat Titterton.

30th July 1898.

Small CAPITALS *indicate First-Class Honours.*

Italics, Second-Class Honours.

Harry Armistead, England
Johannes Hendrikus Bam, South Africa
Francis John Harvey Bateman (B.A.), England
William Bennett, Ireland
Charles Albert Bentley, England
Charles Wilkinson Brecks, England
Alexander James Wright Buchanan, Scotland
Charles Chilton, (M.A., D.Sc.), New Zealand
William Henry Dawson (M.A., B.Sc.), New Zealand
James Henry Sholto Douglas, British Guiana
George Drummond, Scotland
Henry Duckworth, England
Augustus Reginald Eates, India
Frederic Bonner Feast, England
Gilbert Laurie Kerr Finlay (B.A.), Scotland
Gordon William FitzGerald, Trinidad
James Macalmon Fraser, Canada
Edmund Frost, England
John Henry Furniss, England
David Jones Hughes, Wales
Alfred Hugh James, Wales
Frederick Rufus Jones, Australia
Francis Ferguson Kerr, Canada.
John Davis Lithgow, Scotland
Beatrice Anne M'Gregor, Scotland
John Mackenzie, Scotland
Herbert Malins (B.A.), England
Robert Ferris Mudie, Scotland
Bernhard Ehrenfried Myers, New Zealand
George Henry Whiteside Robertson (M.A.), Scotland
James Gillon Ross, Scotland
Harold Victor Sames, England
James Thomson Scott, Scotland
James Falloon Stewart, Ireland
William Archibald Cramsie Ussher, Ireland
Joseph Francis Wilson, England

29th October 1898.

Frederick Thomas Hield Adamson, Scotland
Arthur Leonard Anderson, New Zealand
Edmund Balmer Anderton, England
Frank Beecroft, England

Arnold Louis Joseph Branday, Jamaica
Harry Marchant Bundey, Australia
Duncan Alexander Cameron, England
Richard Craven, England
John Glen Forsyth, Scotland
Joseph Vincent Fox, England
Arthur George Hayden, England
Edith Isabella Hudson, India
Frederick John Jude, Australia
David James Cooper Oliver, Scotland
Duncan James Peirson, England
Dorothy Ellen Pratt, India
Thomas Pretsell, Scotland
Frederick William Price, England
Frederick Stanley Rose, Scotland
Alexander Hamilton Rutherford, Australia
Charles Robert Scott, Scotland
George Harper Wilson, Scotland
John Brunyee Wilson, England

27TH JANUARY 1899.

Paul Clement Campariole, Trinidad
Patrick Padron Joseph Gauteaume, Trinidad
William Fowler Godfrey, Scotland
Henry Waters, Scotland

BACHELORS OF MEDICINE AND BACHELORS OF SURGERY (M.B. AND Ch.B.).

29TH JANUARY 1898.

William Stanford Eaton.

30TH JULY 1898.

Small CAPITALS *indicate First-Class Honours.*

Italics, *Second-Class Honours.*

James Allison, Scotland
James Robertson Anderson, Scotland
WILLIAM NEISH BARKER, Scotland
Emil Paul Baumann, South Africa
Henry Louis Stanley Daly Belasco, British Guiana
William Bell, England
Frans Petrus Bester, South Africa
Harriet Amelia Scott Bird, England
John Macaulay Bowie, Scotland
Edmund Thomas Ralph Branch, West Indies
Stanley Branch, West Indies
Charles Stuart Brebner, England
Robt. Nichol Brebner, Canada
Alfred Edward Brookes, Wales
Harold Holkar Broome, England
Andrew Cassels Brown, England

Edgar Harold Brunt, England
James Burnet (M.A.), Scotland
Isabella Douglas Cameron, Scotland
John Cameron (B.Sc.), Scotland
Robert Cameron, Scotland
Jane Alice Craig, Scotland
William Craig, Scotland
Robert Crawford, England
Faith Philpot Crowther, England
Robert Cumming, Scotland
James Mackie Cuthbert, Scotland
Edgar Ferdinand Cyriax, England
Leonard Joseph Montagu Deas, Scotland
George Dick, Scotland
Robert James Dick, Scotland
William Henry Dickinson, England
Frederick Hendrick Dommisse, South Africa
James Donaldson, Scotland
James Forsyth Falconer, Scotland
David Duncan Farquharson, Scotland
Duncan Forbes, Scotland
Alexander Dingwall Fordyce, Scotland
Charles Forsyth, Scotland
Arthur Forbes Fraser, Scotland
Alfred Thomas Gailleton, Scotland
George Gatenby, England
Harry Edward Gibbs, New Zealand
Robert Gibson, Scotland
Janet Dorothy Gilfillan, England
Andrew Gilmour, Scotland
Alexander Goodall, Scotland
James Maclaren Gray, Scotland
Alexander M'Watt Green, Scotland
Graeme Hamilton, England
Thomas Ernest Hincks, Wales
Cyril Arthur Bennett, Horsford, West Indies
William Elmsley Hutchison (M.A.), Scotland
John William Ingles, Scotland
Alfred Havelock Keun, Straits Settlements
George Edwin James King, England
Robert King, Scotland
James Leggate, Scotland
Patrick Alexander Leighton, Scotland
Ernest William Lewis, India
Edwin Malcolm Lithgow, Scotland
John Spencer Low (B.Sc.), England
Percy Lonsdale M'All (B.A.), England
Alexander Jameson M'Clymont, Scotland
John Cunningham M'Conaghey, India
Edward M'Culloch, Scotland
William Chisholm Macdonald, New Zealand
William Roy Macdonald, Scotland
John M'Gibbon, Scotland
ARCHIBALD CURRIE M'GILCHRIST (M.A.), Scotland
Alexander Morrison M'Intosh, Scotland
Wm. M'Kay, New Zealand
Robert William MacKenna (M.A.), Scotland
John William MacKenzie, Scotland

David Whiteside Maclagan, Scotland
Donald Alexander Macvean, Scotland
Edward Cecil Gordon Maddock, England
Thomas Russell Matthews, Jamaica
Christina Allison Mayne, Scotland
William Percy Meldrum (B.Sc.), Mauritius
Charles William Francis Melville, Scotland
George Waterston Miller (B.Sc.), Scotland
Lawrence Hitchen Barfoot Mills, England
James Monroe, Scotland
Lawrance Dudley Parsons (B.A.), England
Charles Mowbray Pearson, Scotland
George Benjamin Pemberton, Ireland
Hugh Richard Phillips, Wales
Robert Pugh, Wales
James Alexander Raeburn, Scotland
William Raine, England
Alexander Cameron Renwick, England
JOHN HENRY RHODES, England
Henry Hugh Roberts, Wales
George Arthur Rorie, Scotland
ALFRED CHARLES SANDSTEIN, New Zealand
ROBERT FREDERICK M'NAIR SCOTT (B.A.), Scotland
Ibrahim Shalaby, Egypt
Alfred Shearer, Scotland
George Freeland Barbour Simpson, Scotland
John Arthur Creasey Smith, England
Ward Smith, England.
Edgar Somerville, England
William Tarr, England
William Edward Tellet, Scotland
Arthur Henry Thomas, England
Reginald Charles Verley, England
Henry Wade, Scotland
William Edward James Wallis, England
David Wardrop, Scotland
DONALD BREMNER WATERS (M.A.), Scotland
John Rutter Williamson, England
William Carlyle Wilson (M.A.), Scotland
George Grafton Joseph Young, England

29TH OCTOBER 1898.

Daniel Vere Maxwell Adams, Scotland
Anthon Sutherland Allum, Trinidad
Ernest George French, Jamaica
Edgar Robert Grey (B.A.), South Africa
Albert Alexander Gunn, Scotland
Alexander George Hamilton, England
James Hawarth, England
Joseph Hunter, Scotland
Balfour Stuart Hyslop, Scotland
Gerrit Hendrik Willem de Labat, South Africa
William Lockerbie, Scotland

David Valentine M'Intyre (M.A.), Scotland
Andrew M'Kaig, Ireland
William Walker Maxwell, England
15 Philip Ernest Millard, England
William John Nutter, England
Henry Kenneth Paxton, India
Ernest Cromwell Peake, England
Arthur de St Leu Frederick Perigal, England
20 George Herbert Stewart, India
Arthur Henry Thompson, England
Peter George Leeb 'du Toit, South Africa
Arthur George Worrall, Scotland

Fellowships, Scholarships, Bursaries, and Prizes in Medicine.

I.—FELLOWSHIPS.

See note under Scholarships, page 171.

I.—THE SYME SURGICAL FELLOWSHIP.

This Fellowship, of the annual value of about £100, and tenable for two years, is open to award to the Bachelor of Medicine and Master in Surgery, or Bachelor of Medicine and Bachelor of Surgery, of not more than three years' standing, who, in the opinion of the Examiners, has passed a creditable examination for these degrees, for the best Thesis on a Surgical subject giving evidence of original research, or practical talent, whether such Thesis be given in for Graduation or otherwise. The next award may be at the Graduation Ceremonial in July 1901. See Deed of Foundation, at p. 310 of CALENDAR for 1872-73.

1899.

II. THE GOODSIR MEMORIAL FELLOWSHIP.

This Fellowship was founded in 1872 by the subscribers to the fund for a memorial of the late Professor John Goodsir for the encouragement of the study of Anatomy and Physiology. It is of the annual value of about £100, tenable for two years, and is open to all Graduates in Medicine of the University of not more than three years' standing at the time of the competition, and to Licentiates of the Colleges of Physicians or Surgeons of Edinburgh of a like standing, who have attended within the University the same number of classes as are required for the Degrees of M.B. and Ch.B. It is awarded for the best Essay or Treatise containing results of original investigations in Anatomy, Human and Comparative, either Normal or Pathological, or in Experimental Physiology: Candidates may be examined *viva voce* or otherwise

on the subject of their Essays or Treatises if the Examiners shall deem this desirable.

The next award may be made in July 1901, and competing Dissertations must be lodged with the Professor of Anatomy not later than the 30th April previously. *See* Deed of Foundation at p. 314 of CALENDAR for 1872-73.

1899.

III.—THE LECKIE-MACTIER FELLOWSHIP.

The Leckie-Mactier Fellowship, of the annual value of £80, is awarded to Bachelors of Medicine of not more than three years' standing, and is tenable for three years. The examinations comprise written reports and commentaries on medical, surgical, and gynecological cases in the University Wards in the Royal Infirmary, and written examinations in Midwifery, Medical Jurisprudence, and Public Health; also oral examinations in Medicine, Surgery, Midwifery, Medical Jurisprudence, and Public Health. Every holder of the Fellowship must, before the expiry of his tenure, transmit to, and if required read publicly in presence of the Medical Faculty, a communication embodying the result of original observation or historical research in some department of medicine. Next appointment may be made in November 1901. *See* Deed of Foundation at p. 365 of CALENDAR for 1880-81.

1898. *C. M. Cooper, M.B., Ch.B.*

IV. FREELAND BARBOUR FELLOWSHIP.

This Fellowship is of the value of £100, and is open to award, in each alternate year, to the Bachelor of Medicine and Bachelor of Surgery who has gained the highest collective marks in Anatomy, Physiology, and Pathology in the Professional Examinations, and who is prepared to devote not less than one year to original research in Midwifery or diseases of women, in any of the Laboratories or Practical Departments of the University of Edinburgh. The next award may be made in July 1900. *See* Deed of Foundation at page 517 of CALENDAR for 1899-90.

1898. *Alfred Charles Sandstein, M.B., Ch.B.*

V. ALLAN FELLOWSHIP IN CLINICAL MEDICINE AND CLINICAL SURGERY.

This Fellowship, of about £40, is awarded annually, after competitive examination of the six candidates for the degrees of M.B., C.M., or M.B., Ch.B., who, after having attended in the University of Edinburgh the necessary qualifying courses in Clinical Medicine and Clinical Surgery, shall obtain the highest percentage of marks in these subjects at the final examination for these degrees. *See* Deed of Endowment and Regulations, page 833 of CALENDAR for 1899-1900.

II.—FUNDS FOR RESEARCH, &c.

I. THE WILLIAM DICKSON TRAVELLING FUND.

This is a fund for the purpose of assisting Graduates of any Faculty, of not more than three years' standing, to travel for the purpose of study or research. For particulars, see page 185.

II. THE EARL OF MORAY'S BEQUEST FOR THE PROMOTION OF ORIGINAL RESEARCH.

All Graduates and other Members of the University, "or other persons who have given satisfactory proof of General Education and fitness to engage in some special study or research," may apply for grants from this fund. In so far as the subject of the Research admits, the investigation shall be conducted in the Buildings of the University. For further particulars, see page 186. *See* Regulations, page 428 of CALENDAR for 1897-98.

THE SWINEY LECTURESHIP ON GEOLOGY.

This Lectureship is in the patronage of the Trustees of the British Museum, is of the annual value of £144, and is open to Graduates in any of the Faculties of this University who have obtained their Degrees after Examination. For further particulars, see page 274.

III.—SCHOLARSHIPS.

I.—ETTLES SCHOLARSHIP IN MEDICINE.

This Scholarship was founded in 1868 by Miss Mary Ettles of Inverness, and is of the annual value of about £31, 5s. It is awarded annually to the Bachelor of Medicine and Master in Surgery of the University of Edinburgh, whom the Faculty of Medicine may consider the most distinguished of that year. *See* Deed of Foundation, at page 242 of CALENDAR for 1868-69.

1898. *Robert Frederick M'Nair Scott, B.A., M.B., C.M.*

II.—SIBBALD MEDICAL SCHOLARSHIP.

This Scholarship is of the annual value of £40. *First*, The Scholarship is bestowed on, and held by, a Student in the Faculty of Medicine in the University of Edinburgh, *who does not hold any other Scholarship or Bursary*, and is tenable for three years, during each year the Scholar must complete an *Annus Medicus* required from Candidates for the degree of Bachelor of Medicine. *Second*, It is bestowed upon the Student obtaining the highest place by Competitive Examination, and is open to all Candidates who have not previously been Students of Medicine in any other School or University, and

who have attended Medical Classes in the University of Edinburgh, for *not less* than one Winter and one Summer Session, and for *not more* than one Winter and two Summer Sessions. The Competitive Examination is in Chemistry, Botany, Natural History, and Physics, and is conducted in such manner as the Senatus Academicus may, in concurrence with the Trustees, prescribe. The next competition may take place in October 1900. Application to be made to Messrs MACKENZIE, INNES & LOGAN, W.S., 23 Queen Street, Edinburgh.

1897. *Robert Wilson Buchanan, M.A.*

III.—THOMSON SCHOLARSHIP.

The Thomson Scholarship, value £40, tenable for four years, open to matriculated students commencing their first Winter Session in Medicine. The examination is on Botany, Zoology, and Elementary Mechanics. The Scholarship is awarded to the candidate who shall obtain the highest number of marks in the examination. The Trustees, however, reserve power to themselves to withhold the appointment should none of the candidates obtain a sufficiently high percentage of the marks in the examination. Candidates must send in their names to the agents for the Trust before the first day of October in the year in which there is a competition for the Scholarship. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or of the city of Edinburgh, have a preference. The next appointment may be made in October 1902. For other particulars, application to be made to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh.

1898. *Thomas Nicol.*

IV.—COLDSTREAM MEMORIAL MEDICAL MISSIONARY SCHOLARSHIP.

The Coldstream Memorial Medical Missionary Scholarship was founded in memory of the deceased John Coldstream, M.D., F.R.C.P.E. Value £25, and tenable for five years. The holder must be a first year's Medical Student, who intends to devote himself to the life of a Medical Missionary at home or abroad. He must be approved of by the awarders, and pass the preliminary examination before beginning his studies. Next award may be in 1901. A preference is given to students connected with the Edinburgh Medical Missionary Society. A full copy of the conditions can be had on applying to John P. Coldstream, W.S., care of Messrs Mill, Bonar & Hunter, W.S., 15 Hill Street, Edinburgh. *See* Conditions in CALENDAR for 1879-80, p. 357.

1896. *John Alfred Smith.*

V.-XI.—VANS DUNLOP SCHOLARSHIPS.

Seven Scholarships, of £100 each, tenable for three years. Not more than one at a time can be held by the same person. The successful candidates for each of these Scholarships will be required to continue their medical studies in this University during their tenure of their Scholarships, and to graduate as M.B. and Ch.B. *See* Excerpt from Will of Dr Vans Dunlop, p. 380 of CALENDAR for 1880-81.

V. *One* is awarded to the Candidate who, at either the March or the preceding October Medical Preliminary Examination, has obtained the highest number of marks in the Subjects required to enable him to appear for a Professional Examination, provided (1) that he has not already passed the said Preliminary Examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. The next award may be made in March 1902.

1899. *Malcolm Campbell, M.A.*

VI. *One* is awarded at the end of the First Winter of Medical Study to the Student who, after having attended for the first time within the University a Systematic Course of Lectures on each of the subjects of Chemistry, Anatomy, and Physics, and who has not previously attended any course in Chemistry, or Anatomy, or Physics, which qualifies for Degrees in Medicine, or for a Licence in Medicine or Surgery, shall obtain the highest number of marks in an Examination in these subjects, specially conducted for the purpose. The Subjects of Examination in Anatomy will include the Skeleton; Joints; Muscular System; Heart and Great Vessels; General Arrangement of the Nervous System; Position of the Thoracic and Abdominal Viscera. The next award may be made at the end of March 1902.

1899. *Thomas Peebles* and *G. S. Skinner*—equal.

VII. *One* is awarded at the end of the first Summer Session of Medical Study to the Student who, after having attended for the first time within this University a Systematic Course of Lectures on each of the subjects of Botany and Zoology, and who has not previously attended any course in Botany or Zoology which qualifies for Degrees in Medicine, or for a Licence in Medicine or Surgery, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The next award may be made at the end of July 1902.

1899.

VIII. *One* is awarded at the end of the Second Winter of Medical Study to the Student who, after having attended within the University for the first time a Systematic Course in each of the subjects of Physiology and Surgery, and who has not previously attended a Course of Physiology or Surgery which qualifies for Degrees in Medicine, or for

a Licence in Medicine or Surgery, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The Subjects of the Examination in Physiology will embrace the Histology and Physiology of the Simple Tissues, and of the Organs concerned in Nutrition. The whole subject of Nutrition will be included, and also Animal Heat. The next award may be made at the end of March 1902.

1899. *A. B. Ross.*

Prox. access., J. A. Ellerbek and B. P. Watson.

IX. *One* at the beginning of the Fourth Winter Session of Medical Study to the Student who, after having attended within the University the Systematic and Practical Instruction in the subjects of Anatomy and Physiology, and, having passed the Second Professional Examination, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The successful Candidate will be required to continue his studies in this University during the first two years of his tenure of the Scholarship, and at the end of the second year to graduate as M.B. and Ch.B.; and during the remaining year to prosecute original investigation in one or other of the Research Laboratories in the Faculty of Medicine. The next award may be made in October 1899.

1896. *George Lyon.*

X. *One* at the beginning of the Fourth Winter Session of Medical Study to the Student who, after having attended within the University a Systematic Course in the Subject of Materia Medica (including Pharmacology), and, having passed the Second Professional Examination, shall obtain the highest number of marks in an Examination in that subject specially conducted for the purpose. The successful Candidate will be required to continue his studies in this University during at least two years of his tenure of the Scholarship, and at the end of the second year to graduate as M.B. and Ch.B.; and during the remainder of his tenure of the Scholarship to devote himself to original investigation in the Materia Medica Laboratory in the Faculty of Medicine. The next award may made in January 1900.

1896. *D. B. Waters.*

Prox. access., A. C. M'Gilchrist.

XI. *One* to be awarded at the beginning of the Fifth Winter Session of Medical Study, to the Student who, after having attended within the University, the Systematic and Practical Courses in Pathology and the Systematic Courses in Medical Jurisprudence and Public Health, and having passed the Third Professional Examination, shall obtain the highest number of marks in an Examination in these subjects specially conducted for the purpose. The successful Candidate will be required to continue his studies and graduate as M.B. and Ch.B. in this University, during the first year of his tenure of the Scholarship, and to devote himself during the remainder of his tenure to original investigation in

one or other of the Research Laboratories in the Faculty of Medicine. The next award may be made in October 1899.

1896. *John Malcolm.*

XII.—THE MURCHISON MEMORIAL SCHOLARSHIP.

This Scholarship consists of the annual proceeds of about £1000, awarded in alternate years in London and Edinburgh, for proficiency in Clinical Medicine. Candidates must be registered medical students who have attended for not less than five nor more than seven years at Hospitals and Classes at Edinburgh or London, recognised by the University of Edinburgh or the Royal College of Physicians of London. The competition in 1900 will be held in London.

1897, *Percy Theodore Herring*; 1898, *John Basil Page*; 1899,

XIII.—STARK SCHOLARSHIP IN CLINICAL MEDICINE.

This Scholarship, of £112, less expenses, and tenable for one year, is for the encouragement of the study of Clinical Medicine. It is open to competition among all matriculated students of the University who are or have been in attendance at the University Class of Clinical Medicine, and to Bachelors of Medicine of the University of not more than eighteen months' standing who have attended this class. It is open every second year alternately with the competition in Edinburgh for the Murchison Memorial Scholarship. The Examination, oral and in writing, includes (*a*) Examination of Patients; (*b*) Questions on Therapeutics and Pathology; (*c*) Examination of Specimens. Each holder of the Scholarship is required to devote his time in the wards of the Professors of Clinical Medicine to original investigation or other work directly connected with Clinical Medicine; to report his proceedings every three months to the Professors of Clinical Medicine; and, within a reasonable time after the expiry of his tenure of the Scholarship, to present to the Faculty of Medicine a written statement of the results of his investigations or other work. It cannot be held along with any other Fellowship, Scholarship, or Bursary in a Scottish University. The next Competition will take place in July 1900. *See* Deed of Foundation at p. 427 of CALENDAR for 1884-85.

1898. *George Edwin James King, M.B., Ch.B.* (resigned).
E. F. Bashford.

XIV.—BUCHANAN SCHOLARSHIP.

This Scholarship, of the value of about £40, founded by Mrs Jane Jack or Buchanan, Moray Place, Edinburgh, is awarded annually to the Graduate in Medicine of the year who has shown the highest proficiency in Midwifery and Gynecology, as evidenced in (1) the Class Examinations of Midwifery and Diseases of Women and Children; (2) the Records kept by him of cases treated in the Gyneco-

logical Section of the University Class of Clinical Medicine in the Buchanan Ward of the Royal Infirmary, and (3) the Final Examination in Medicine for the Degree of M.B. The Scholar is required to act as non-resident Clinical Clerk in the University Gynecological Ward, and to give assistance in the Examination of Class Exercises. *See* Deed of Foundation, p. 707 of CALENDAR for 1894-95.

1898. *John Henry Rhodes, M.B., Ch.B.*

XV.—THE JAMES SCOTT SCHOLARSHIP.

This Scholarship, founded by Mrs Mary Ann Scott or Thomson of Hawick, of the value of £32, 10s., is awarded annually at the Graduation Ceremonial in Medicine in August for proficiency in Midwifery. The award is based upon the results of the Competitive Examinations in the Class of Midwifery, upon the character of the records of Cases of Midwifery attended by the Candidate at the Royal Maternity and Simpson Memorial Hospital, and upon the position obtained by him at the Final Examination for Degrees in Medicine. The Scholarship is for one year, but may, in special circumstances, be continued for another year. *See* Deed of Foundation, p. 410 of CALENDAR for 1883-84.

1898. *Alfred Charles Sandstein, M.B., Ch.B.*

XVI., XVII.—HOPE PRIZE SCHOLARSHIPS.

Two Hope Prize Scholarships in Chemistry, each of the annual value of about £30. For particulars, *see* under Scholarships in Science.

XVIII.—THE MOUAT SCHOLARSHIP IN THE PRACTICE OF PHYSICS.

This Scholarship, of the value of about £55, 4s. (partly in money and partly in the form of a bronze medallion), is awarded annually at the Graduation Ceremonial in Medicine, to the graduate in Medicine who shall have taken the highest place in the competitive Examinations in the Class of Practice of Physic (Medicine) in this University, and in the Oral and Written Examinations in that subject in the Final Examination.

The Scholar shall be bound during his year of tenure to pursue the study of Medicine either as resident in an Infirmary or Hospital, or in the University of Edinburgh, or other University or Medical School at home or abroad, and to present, at the close of such year, to the Professor of Practice of Physic, or to the Senatus Academicus, a Report of the work he has done in such Infirmary, Hospital, University, or Medical School. The money part of the Scholarship will only be paid on the Senatus receiving a certificate from the Dean of the Faculty that the conditions of the Scholarship have been duly fulfilled.

1898. *Alexander Dingwall Fordyce, M.B., Ch.B.*

XIX.—MACKAY SMITH SCHOLARSHIP IN CHEMISTRY.

This Scholarship is of the annual value of £25, tenable for two years, and is open for competition to Students who have attended the Class of Chemistry in this University. The successful Candidate is bound to attend the Class of Chemistry, or to prosecute the study of Chemistry in the University during at least one year of his tenure of the Scholarship, in such way as the Senatus Academicus may direct or approve. The next Examination will take place in 26th March 1900.

1898. *S. A. Ellerbek.*

XX.-XXIII. -CRICHTON SCHOLARSHIPS FOR RESEARCH.

Four Scholarships, each of the value of £100, tenable for one year, with power of re-appointment for a second and for a third year, are open in rotation in the subjects of Anatomy, Physiology, Materia Medica, and Pathology, for the prosecution of Research by Graduates who have been Students of this University for not less than four years. The Scholarships in Anatomy and Physiology will be open in 1899. Candidates are required to submit a sufficient description of the work they propose to undertake to the Dean of the Faculty of Medicine on or before 1st September. The Examination is both written and practical, bearing on Research Work. See Regulations, page 750 of CALENDAR for 1895-96.

1898. *P. T. Herring, M.B., C.M.* (*Pathology*).

XXIV.—HOULDSWORTH SCHOLARSHIP.

This Scholarship, founded by the Houldsworth Trustees for the purpose of promoting Research in Pharmacology in the Department of Materia Medica in the University, is of the annual value of about £46, and tenable for one year, with power to re-elect for a second, or even a third year if good work is being done by the scholar. It is awarded to a Graduate in, or Student of Medicine of, the University, after such examination, competitive or otherwise, as may be deemed necessary. The scholar must, during his tenure, produce such evidence of his progress in Pharmacological investigation as may be required by the Professor of Materia Medica. For Deed of Foundation, see page 421 of CALENDAR for 1897-98.

1899. *C. H. Kruger, M.B., CM.*

III.—BURSARIES.

See note under Bursaries, page 155.

No. of Foundation.	Year of Found.	Name of Founder.	Total Annual Income.	No. of Bursars.	For Years.	Annual Allowance to each Bursar.	Patrons.
I.	1[illegible]4	Dr Abercromby, Cape Town.	£ 0 0 0	1		£50 0 0	Governors of George Heriot's Trust.
II.	1[illegible]71	Dr J. R. Sibbald's Trustees.	About 150 0 0	5	3	30 0 0	Trustees of Dr J. R. Sibbald.
III.	1[illegible]7	Dr Mackie's Trustees.	[illegible] 0 0	2	2	30 0 0	Professors of Fac. of Med. in Univ., Edin.
IV.	1873	Mr Grierson of Ogscastle's Trustees.	60 0 0 20 0 0	3 1	1 1	20 0 0 10 0 0	Senatus.
				1	1	10 0 0	
V.	1878	Dr Andrew Thomson	200 0 0	8	4	25 0 0	Trus. of Dr Thomson.
VI.	1[illegible]7	William Mackenzie	[illegible] 10 0	2	1	10 5 0	Senatus.
VII.	1878	John Aitken Carlyle	56 0 0	2	1	28 0 0	Senatus.
VIII.	1882	Mrs Ronald of Liverpool	80 0 0	2		About 40 0 0	Senatus.
IX.	16—	George Heriot. Remodelled 1887	480 0 0 About	6	4	30 0 0	Governors of George Heriot's Trust.
X.	1890	Major Robert Orr Crichton of Lynn, M.D.	500 0 0	10	4	50 0 0	Senatus Academicus.
XI.	1809	Dr Donald Grant, London.	180 0 0 About	2	4	90 0 0 About	Dr Grant's Trustees.
XII.	1846	John Jamieson, Edinburgh.	26 0 0	1	4	26 0 0	Principal and Two Professors.
XIII.	1883	Wm. Renton, Edinburgh.	20 0 0	1	1	20 0 0	Professors of Mathematics, Natural Philosophy, Chemistry, and Political Economy.
XIV.	1886	Richard Allan, Feuar, Kelso.	90 0 0	3	3	About 30 0 0	Trustees of R. Allan.
XV.	1889	Daniel Maclaurin, London.	62 10 0	1	4	62 10 0	Town Council.
XVI.	1[illegible]7	M'Cosh (Graduates)	...	1	1	[illegible] 0 0	Senatus.
XVII.	1897	M'Cosh (Medical).	...	1	1	11 11 4	Senatus.

I. *Heriot's Bursary.*—Open by competition, in the event of more than one candidate coming forward, to Students who have been educated in George Heriot's School, and have finished their course as Heriot Bursars, to aid them in further prosecution of their studies for any of the learned professions. Students in the Faculty of Medicine to be always preferred. Candidates are referred to the Treasurer of the Heriot Trust, 20 York Place, Edinburgh, before 15th September.

II. *Sibbald Bursaries.*—These Bursaries, each tenable for three years, are available to Students in the Faculty of Arts, Medicine, Law, or Divinity, entering the University who have not previously attended any University in the United Kingdom or elsewhere, *and who do not hold any other Bursary or Scholarship*, but no objection to a Candidate that he has, during the previous

Summer Session, attended any of the Classes in the University of Edinburgh required by the Faculties of Medicine or Law. The examination is the same as the Preliminary and Bursary Examination in the Faculty of Arts at the commencement of each Winter Session. Application to be made to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh, before 15th September.

1898. *R. W. Buchanan.*

III. *Mackie Bursaries.*—These Bursaries are awarded to Students of Medicine of the University, one of which is open to Students who have completed their First Annus Medicus, and the other to Students who have completed their Second Annus Medicus, and who are, in the opinion of the Faculty of Medicine, in such pecuniary circumstances as to require assistance. In the event of no appointment having been made to either Bursary on any occasion when it is vacant, the Senatus may, on the recommendation of the Faculty of Medicine, appoint any Candidate to the vacant Bursary who has completed either his first or his second *Annus Medicus* and who otherwise satisfies the requirements of tenure. *Bursars* 1898, *first year*, *A. K. Baxter* and *J. M. Johnston*—equal; *second year*, *George A. Jolly.*

IV. *Grierson Bursaries.*—Candidates from the parishes of Crawford or Leadhills, about to commence their Medical Curriculum, who have passed in the University of Edinburgh a satisfactory examination in the preliminary subjects required by the Regulations for Graduation in Medicine, who have been diligent students, and who require pecuniary aid to enable them to pursue their studies, have a preference. In the case of more candidates than one, the Bursary will be awarded to the best qualified, on examination in the subjects above referred to.

Failing the appointment of preferential candidates, the Bursaries will be tenable for periods of one year only, in manner following, viz.: *One* will be awarded to the student who, not having completed his twenty-first year, shall pass the best examination of the year in the subjects of the preliminary examination, provided (1) that he has not already passed the said preliminary examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. *One* will be awarded by competitive examination to the student beginning the Second Winter Session, who having already passed the Preliminary Examination required for Graduation in Medicine, shall pass the best examination in the subjects of Chemistry, Botany, Natural History, and Physics. *One* will be awarded by competitive examination to the student beginning the Third Winter Session who, having already passed the First Professional Examination, shall pass the best examination in the subjects of Anatomy and Physiology. *One* will be awarded by competitive examination in Materia Medica at the beginning of the Fourth Winter Session. *One* will be awarded by competitive examination in Pathology at the beginning of the Fifth Winter Session. *Bursars*—1898, *first year*, *Alexander MacRae*: *second year*, *H. H. Robarts*: *third year*, *H. L. Spark*: *fourth year*, *A. A. Martin*: *fifth year*, *David Ewart.*

V. One *Thomson Bursary* is awarded at each of the Preliminary Examinations

held in Spring and Autumn, to the Candidate who, being about to commence his Curriculum, takes the highest place in the Medical Preliminary Examination: provided (1) that he has not already passed the said Preliminary Examination; and (2) that, in the event of his having passed an equivalent examination and presenting himself for the Medical Preliminary Examination, he shall waive all right to admission to the Faculty of Medicine except through the ordinary Medical Preliminary Examination of this University. Students of the name of Thomson or Traquair, or those who are natives of the town or county of Dumfries, or of the city of Edinburgh, have a preference. Candidates must enter for the Preliminary Examination before 19th September 1899, and 1st March 1900 for the Autumn and Spring Examinations respectively, and those claiming a preference must intimate their names to Messrs Traquair, Dickson & Maclaren, W.S., 11 Hill Street, Edinburgh, the agents for the Trust (from whom further particulars may be obtained), at least one clear week before the Examinations. *Bursars*—1898-99, *J. M. Darling; James Lochhead.*

VI. *Mackenzie Bursaries*, open to Students of Anatomy Classes, of any year, who shall display the greatest industry and skill in Practical Anatomy during the Winter Session. *See* CALENDAR for 1879-80, p. 353. *Bursars*—1899, *R. E. Russell* and *C. H. Rosenberg, B.A.*—equal; *R. G. Adams* and *W. Y. Woodburn*—equal.

VII. *John Aitken Carlyle Bursaries*, one is awarded at the end of every Winter Session to a first year Student for proficiency shown in the ordinary class examinations in Anatomy and Chemistry, the other to a second year's Student for proficiency shown in the ordinary class examinations in Anatomy and Physiology. *See* CALENDAR for 1879-80, p. 350. *Bursars*—Senior, *R. E. Russell*; Junior, *Thomas Peebles* (resigned).

VIII. The *Anderson Bursaries* have been founded by Mrs Ronald of Liverpool, and will come into operation on the death of an annuitant. For Deed of Foundation, *see* CALENDAR 1882-83, p. 396.

IX. The *Heriot Bursaries* are for Students unconnected with the Hospital, entering upon a regular Curriculum with a view to graduation. For remodelled scheme, see CALENDAR, 1887-88, p. 498. For subjects of Examination, &c., see under Bursaries open in Faculty of Arts.

X. *Crichton Bursaries.*—Two of these Bursaries are open annually—one in Autumn and one in Spring—to Students entering the Faculty of Medicine of this University who have been born in Scotland. The subjects of Examination are Latin, Greek, French, German, Mathematics, Logic, and Moral Philosophy. Each Bursary is of the annual value of £50, tenable for four years, provided the Bursars continue Students of the Medical Faculty of this University. *See* Excerpt from Deed, p. 540 of CALENDAR for 1891-92, and Regulations, p. 749 of CALENDAR for 1895-96. *Bursar*—1897, *Charles M. Campbell;* 1898, *D. D. Paton.* 1899—*Henry Speirs.*

XI. The *Grant Mortification* is for Students of the University of Edinburgh, of the name of Grant. The holders may attend the Arts, Medical, Divinity, or Law Classes. Application for information may be made to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh.

XII. The *Jamieson Bursary* is for the benefit of the sons of schoolmasters, farmers, mechanics, and labourers, and other persons born and residing within any one of the following parishes—viz., Crawfordjohn, Crawford, united parishes of Lamington and Wandell, united parishes of Wiston and Roberton, Culter and Biggar. The Bursar may attend Classes in any of the Faculties.

XIII. The *Renton Bursary*, founded by the late William Renton. Candidates must attend one or more of the classes of Natural Philosophy, Mathematics, Chemistry, or Political Economy, and must show that they require pecuniary aid. It cannot be held by any one under the age of sixteen or above twenty-one, or with another Bursary of the value of £30 or upwards. The Examination is in English and Mathematics, as for the First Year Open Bursaries in Arts.

XIV. *Allan Bursaries.*—These Bursaries are available to Students attending classes in any of the Faculties of Arts, Science, Medicine, or Law, in the University of Edinburgh, and are tenable for three years or for such part of that period as the Bursar shall remain a Student at the University. In nominating Candidates for presentation to the Bursaries, care will be given to prefer such as have been born in the parish of Kelso, provided they are qualified by their previous education for entering the University. Apply to P. Stormonth Darling, Esq., writer, Kelso.

XV. *Maclaurin Bursary.* This Bursary, tenable for four years, is by the will of the founder to be called the "Maclaurin Bursary," and is restricted to Students of the Founder's name of Maclaurin (or in Gaelic orthography "Maclalhrin"). It may be held in any of the Faculties. *See* Deed of Foundation, p. 544 of CALENDAR for 1890-91.

XVI., XVII. *The M'Cosh Graduate' Bursary and M'Cosh Medical Bursary.* Each Bursary is tenable for one year, during which the holder will be required to prosecute Study or Research in a Medical School or Medical Schools of Europe, it being in the discretion of the Faculty of Medicine to award both Bursaries to the same person. Applications for the Bursaries must be made to the Dean of the Faculty of Medicine not later than the end of the third week of July, and must be accompanied with a statement of the name or names of the Medical School or schools intended to be visited, of the time proposed to be spent at each school, and of the nature of the study or special work proposed to be engaged in. Bachelors of Medicine and Bachelors of Surgery are eligible for appointment during one year after receiving these degrees. In considering the claims of candidates, the Faculty of Medicine will take into account not only their professional attainments and ability, but also the knowledge they possess of foreign languages; and it shall be in the option of the Faculty to satisfy themselves with regard to this knowledge by the examination of candidates. Candidates who already hold a Bursary, Scholarship, or Fellowship will not be disqualified except in cases where the Bursary, Scholarship, or Fellowship requires, as a condition of tenure, the prosecution of Original Research, or some other condition which may be interfered with by the holding of a M'Cosh Bursary. Holders of the Bursaries will be required at the end of each three months to transmit to the Dean of the Faculty of Medicine a report of the manner in which they are pursuing their studies, or of the progress being made in any special work in which they are engaged.

IV.—PRIZES.

See note under Bursaries, page 155.

I.—NEIL ARNOTT PRIZE FOR EXPERIMENTAL PHYSICS.

This Prize, of the value of about £37, 10s., presented to the University by Dr Neil Arnott of London, is awarded annually in October to the Candidate who shall pass with the greatest distinction the Ordinary Examination in Natural Philosophy for the Degree of M.A., with such additional Examination in Experimental Physics as the Examiners may require. Candidates must have been Students of Medicine of this University during either a summer or a winter session; and the successful candidate must continue a Student of Medicine at this University during the next Winter Session, failing which, the prize will be forfeited and assigned to the competitor next in merit. No student can appear for examination after the completion of his third *annus medicus*; and no candidate shall be allowed to offer himself more than once.

In the event of a competitor, qualified as above, not coming forward, the prize will be awarded to a Candidate for a Degree in Arts who shall pass with most distinction the ordinary examination in Natural Philosophy. *See* Deed of Foundation at p. 274 of CALENDAR for 1870-71.

1898. *A. R. Normand* (*Arts student*).

II. THE ROBERT WILSON MEMORIAL PRIZE.

This Prize was founded by John Wilson of South Bantaskine, in memory of his son, Robert Wilson, and is of the value of £7, 16s. in money and a bronze medal. It is annually awarded at the close of the Winter Session to the student in the senior Chemistry Class who takes the highest honours. *See* Deed of Foundation at p. 351 of CALENDAR for 1876-77.

1899. *Cameron R. Gibson.*
Prox. access., A. R. Normand, and T. Peebles.

III.—THE ELLIS PRIZE FOR PHYSIOLOGY.

This Prize consists of the proceeds of a sum of £500 bequeathed by the late Daniel Ellis, Esq., to the Principal and Faculty of Medicine of the University of Edinburgh, accumulated for three or five years. The present value is about £30 per annum. It is awarded for the best Essay or Treatise on some subject of Animal or Vegetable Physiology proposed by the Faculty for competition to Students or Graduates of not more than five years' standing.

1898. *Alexander Corsar Sturrock, M.A., M.D., C.M.*

IV.—PRIZES FOR THESES.

Gold Medals, each of the value of £10, are awarded annually on the day of graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

V.—THE WIGHTMAN PRIZE IN CLINICAL MEDICINE.

This Prize of £12 was founded by Mrs E. Wightman, in memory of her son, J. T. Wightman, M.B., C.M., and is annually awarded at the close of the Summer Session to the student attending the Class of Clinical Medicine for the best Dissertation on any subject presented by the Faculty of Medicine, or for the best Report and Commentary on cases which have during the previous Winter and Summer Sessions been treated in the University Clinical Wards in the Royal Infirmary. Three months' notice of subject is given by the Faculty of Medicine. *See* Deed of Foundation at p. 348 of CALENDAR for 1876-77.

The Prize, which is open to members of the Clinical Class of either Winter 1898-99 or Summer 1899, will be awarded for the best report and commentary on cases. The Essays to be given in before 6th July.

1898. *Robert William Mackenna, M.A., M.B., Ch.B.*

VI.—THE BEANEY PRIZE.

This Prize of £32, 10s., was founded in 1878 by James George Beaney, Esq. of Melbourne. It is awarded at the Graduation Ceremonial in Medicine to the Graduate in Medicine and Surgery of the year who, having attended within the University courses on Anatomy, Surgery, and Clinical Surgery qualifying for Graduation, obtains the highest number of marks during his examinations in these subjects for the Degrees of Bachelor of Medicine and Master in Surgery. The Senatus has the power of withholding the Prize in the event of no Student passing the above examinations with sufficient merit. *See* Deed of Foundation at p. 371 of CALENDAR for 1878-9.

1898. *John Henry Rhodes, M.B., Ch.B.*

VII.—THE CAMERON PRIZE.

This Prize was founded in 1878 by the late Dr Andrew Robertson Cameron, of Richmond, New South Wales, with a sum of £2000. The regulations were remodelled by the Educational Endowments (Scotland) Commission, and the annual proceeds, which, after defraying the necessary expenses, amount to about £80, may be awarded annually to a person who in the course of the five years immediately preceding has made any highly important and valuable addition to Practical Therapeutics. The Prize-man is required to deliver a lecture or course of lectures on the addition to Practical Therapeutics so made by him, or to publish an account of such addition in such manner as the Senatus may prescribe. The prize will not be awarded if, in the opinion of the Senatus, no addition to Practical Therapeutics has been made within the said period of five years of sufficient importance and value to justify the awarding of the

prize. The prize is awarded annually at the Graduation Ceremonial in August. *See* Remodelled Regulations, p. 497 of CALENDAR for 1888-89.

1898. *Sydney Monckton Copeman, M.D., for his researches on the employment of Glycerine for destroying such Pathogenic Organisms as may be present in Vaccine Lymph.*

VIII.—THE DOBBIE SMITH PRIZE IN BOTANY.

This prize, which consists of a Gold Medal, is open to competition each alternate year to all Matriculated Students of the year of the award, for an Essay on a Botanical subject. The subject of the next competition is an original investigation "On the Structure, Development, and Life History of any British Flowering Plant;" and the memoir is to be accompanied with a series of illustrative specimens. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before 1st July 1901. The prize will be awarded to the successful competitor at the Graduation Ceremonial in July 1901.

1899.

IX.-XIX. THE GUNNING VICTORIA JUBILEE PRIZES.

Dr Gunning, of Edinburgh and Rio de Janeiro, has founded Eleven Post-Graduation Prizes of the value of £50 each, viz.:—(1) The Monro prize for Anatomy; (2) The Bell prize for Physiology; (3) The Edward Forbes prize for Zoology, &c.; (4) The Hutton Balfour prize for Botany; (5) The Joseph Black prize for Chemistry; (6) The Christison prize for Materia Medica; (7) The Lister prize for Surgery; (8) The Gregory prize for Practice of Physic; (9) The John Thomson prize for Pathology; (10) The Simpson prize for Obstetrics; (11) The Alison prize for Forensic Medicine and Public Health. Candidates must be either Bachelors of Medicine or Bachelors of Science of this University of not more than three years' standing. The prizes will be awarded with the approval of the Senatus for (1st) either (*a*) Competitive Essays written specially for the prizes, or (*b*) Theses submitted for Graduation; or (2nd) for original research conducted under supervision of the Professor in the department in which the prize is awarded. Two prizes will be awarded annually in the following rotation, viz.:—Materia Medica, Obstetrics, Public Health and Forensic Medicine, Anatomy, Chemistry, Practice of Physic, Physiology, Botany, Surgery, Pathology, and Zoology. Competitive Essays are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April of the year in which each prize is to be awarded, and the successful competitors will be announced annually at the Graduation Ceremonial in Medicine.

1898.—No awards.

XX.—ANDERSON HENRY PRIZE.

The Prize was founded by Isaac Anderson Henry of Woodend, and consists of the proceeds of a sum of £300 accumulated for three years.

It is awarded for the best and approved essay on a botanical subject proposed by the Professor of Botany, the Curator of the Royal Botanic Garden, and the President of the Botanical Society of Edinburgh, for competition to students in the Class of Botany in the University of Edinburgh, during any of the three years preceding the date of the award. The next award may be made in August 1901. Competing Essays to be sent to the Dean of the Faculty of Medicine on or before 1st July 1900.

1898.—Not awarded.

XXI.—MILNER FOTHERGILL MEDAL IN THERAPEUTICS.

This Medal, of the value of about £20, is awarded biennially. It is open for competition to Graduates in Medicine of the University, who have been members of the Class of Materia Medica in the University, for the best essay which shall include a description of original research made by the Candidate on a Pharmacological or Therapeutic subject, preference being given to a subject relating to Dietetics. *See* Deed of Foundation, p. 542 of CALENDAR for 1891-92. The next award may be made at the Graduation Ceremonial in August 1901. Essays to be lodged with the Professor of Materia Medica on or before 30th April 1901.

1899.

XXII.—PATTISON PRIZE IN CLINICAL SURGERY.

This Prize, of about £10, 10s., is awarded annually to the Student of the University Class of Clinical Surgery who shall write the best Report and Commentary on cases treated in the University Surgical Wards during the Academic Year. The Essays to be given in before 6th July.

1898. Lionel Charles Peel Ritchie.

FELLOWSHIPS, SCHOLARSHIPS, BURSARIES, AND PRIZES OPEN TO COMPETITION IN THE FACULTY OF MEDICINE IN 1899-1900.[1]

For further information, and for information regarding other Scholarships, Fellowships, Bursaries, and Prizes, see above, where full information regarding the conditions of tenure and the values are given.

FELLOWSHIPS.[1]

See note under Scholarships, page 171.

1. *The Freeland Barbour Fellowship*, No. IV., page 403.
2. *The Allan Fellowship in Clinical Medicine and Clinical Surgery*, No. V., page 403.

[1] *N.B.*—The values of the Fellowships, Scholarships, Bursaries, and Prizes are subject to variation consequent on the rise or fall of the rate of interest, &c. No Candidate will be allowed to hold the same Fellowship, Scholarship, Bursary, or Prize more than once.

FUNDS FOR RESEARCH, &c.

1. *The William Dickson Travelling Fund*, No. I., page 404.

2. *Earl of Moray Fund for the Promotion of Original Research*, No. II., page 404.

SCHOLARSHIPS.[1]

Three Vans Dunlop Scholarships.

1. *One* in Anatomy and Physiology, No. IX., page 407. The next competition will take place in October 1899. Names of Candidates to be sent to the Dean of the Faculty of Medicine on or before 1st October.

2. *One* in Materia Medica (including Pharmacology) No. X., page 407. The next competition may take place in January 1900. Names to be sent in to the Dean of the Faculty of Medicine on or before 15th December 1899.

3. *One* in Pathology, Forensic Medicine and Public Health, No. XI., page 407. The next competition will take place in October 1899. Names of Candidates to be sent in to the Dean of the Faculty of Medicine on or before 1st October.

4. *The Stark Scholarship in Clinical Medicine*, No. XIII., page 408. The next competition will take place in July 1900.

5. *The Mouat Scholarship in Practice of Physic*, No. XVIII., page 409.

6. *The Murchison Memorial Scholarship*, No. XII., page 408. The competition in 1900 will take place in London.

7. *The Buchanan Scholarship*, No. XIV., page 408.

8. *The James Scott Scholarship*, No. XV., page 409.

9. *The Ettles Scholarship in Medicine*, No. I., page 404.

10, 11. *Two Hope Prize Scholarships*, No. XVI., page 409.

12, 13. *Two Crichton Scholarships for Research*, No. XX., page 410.

14. *Sibbald Medical Scholarship*, No. II., page 404. The next competition will take place in October 1900. Application to be made to Messrs Mackenzie, Innes & Logan, W.S., 23 Queen Street, Edinburgh, before 1st October.

15. *The Houldsworth Scholarship*, No. XXIV., page 410. The next competition will take place in January 1900, the date to be afterwards announced. Candidates to give in their names to the Dean of the Faculty of Medicine on or before 27th December 1899.

16. *The Mackay Smith Scholarship in Chemistry*, No. XIX., page 410. The next Examination will take place in 20th March 1900 at 10. Names of Candidates to be entered at the Matriculation Office on or before 15th March.

BURSARIES.[1]

Town Council Bursaries.— Candidates for Bursaries in the gift of the Town Council, a number of which are vacant (and some of which may be held in the Faculty of Medicine), are referred to the "*City Clerk*,

[1] See footnote, page 418.

Council Chambers, Edinburgh," to whom early application should be made.

1, 2. *Two Sibbald Bursaries*, No. II., page 411.

3, 4. *Two Thomson Bursaries*, No. V., page 412.

5-9. *Five Grierson Bursaries*, No. IV., page 412. The competition for the Second, Third, Fourth, and Fifth year Bursaries will take place on Thursday 12th, Friday 13th, and Saturday 14th October 1899, at hours to be afterwards announced. Names of Candidates to be entered on or before 1st October.

10, 11. *Two John Aitken Carlyle Bursaries*, No. VII., page 411.

12, 13. *Two Mackenzie Bursaries*, No. VI., page 411.

14. *Renton Bursary*, No. XIII., page 411.

15, 16. *Two Crichton Bursaries*, No. X., page 411.

17. *The M'Cosh Graduates' Bursary* of £153, *and M'Cosh Medical Bursary*, Nos. XVI. and XVII., page 414.

18. *Four Buchanan Bursaries*, may be held in the Faculty of Medicine. See under Bursaries in the Faculty of Arts, open in October 1899.

Competitors for the above Fellowships, Scholarships, and Bursaries, excepting those awarded for the subjects of Preliminary Examination, must have studied the subjects of Examination at the University of Edinburgh. No Fellowship, Scholarship, or Bursary, with the exception of the Ettles Scholarship, can be held along with any other Fellowship, Scholarship, or Bursary.

PRIZES.[1]

The Medical Faculty Medals. Gold Medals are given on the day of Graduation to Doctors of Medicine whose Theses are deemed worthy of that honour.

1. *The Neil Arnott Prize*, No. I., page 415.

2. *The Beaney Prize*, No. VI., page 416.

3. *The Cameron Prize*, No. VII., page 416.

4, 5. *The Cunning Victoria Jubilee Prizes*, in Materia Medica and Obstetrics, No. IX., page 417. Essays, Theses, or descriptions of researches are required to be lodged with the Dean of the Faculty of Medicine on or before 30th April 1900.

6. *The Wightman Prize*, No. V., page 416. The Essays to be lodged with the Dean of the Faculty of Medicine on or before 6th July.

7. *The Pattison Prize*, No. XXII., page 418. The Essays to be lodged with the Dean of the Faculty of Medicine on or before 6th July.

8. *The Anderson Henry Prize*, No. XX., page 417. Competing Essays to be sent to the Dean of the Faculty of Medicine before 1st July 1900.

9. *The Robert Wilson Memorial Prize*, No. II., page 415.

[1] See footnote, page 418.

10. *The Lord Rector's Prize*, No. 1., page 189.
11, 12, 13. *The Gray Prize Essays*, Nos. 7, 8, and 9, page 189.

LECTURESHIP.

The Swiney Lectureship on Geology, value £144 per annum, tenable for five years, is open to Graduates of the University of Edinburgh. It is in the patronage of the Trustees of the British Museum.

Bursars in the Faculty of Medicine must annually attend at least two of the Classes necessary for the Degrees of M.B. and Ch.B., and must present themselves at the Examinations necessary for these Degrees.

Each Bursar must present a Certificate, signed by the Dean, attesting his regular attendance on the proper Classes in the Faculty on each occasion on which he applies to the Factor for a payment.

Certificates, in terms of this regulation, will be given to Bursars, by the *Dean of the Faculty of Medicine*, after 14th November ; also at the end of the Session. In applying to the Dean for the Certificate, Bursars must present their Class Cards for the Session, and also all Class Certificates and Honours Certificates obtained since the last payment. Payments are made by the University Factor, Mr Henry Cook, W.S., 61 North Castle Street, Edinburgh, on and after 14th November for the Martinmas payments, and on and after 18th May for the Whitsunday payments,—between 10 and 3 o'clock.

N.B. *Bursars, Scholars, and Fellows who desire to resign should at once announce this to the Dean and to the Factor. They must apply to the Factor for the instalments due to them within three months after they have become payable, otherwise they will be regarded as having resigned.*

THOMAS R. FRASER, M.D., LL.D.,
Dean of the Faculty of Medicine and Professor of Materia Medica.

Faculty of Music.

Dean—Professor NIECKS, Mus. D.

STUDENTS who do not intend to graduate in Music may, without matriculating or passing any Preliminary Examination, attend any of the Classes on payment of the Five Shillings University Entrance-Fee, besides the Class Fees.

Those desiring to graduate must pass the Preliminary Examination, and must Matriculate before enrolling in any Class.

The Classes, open both to men and women students, will meet as undernoted, except during the Christmas Vacation, *i.e.* from Friday, 22nd December 1899, to Tuesday, 9th January 1900, inclusively; and will close on 19th March.

Programme of Classes.

WINTER SESSION, 1899-1900.

PROFESSOR NIECKS.

Lectures, Theoretical and Practical Instruction, and Concerts, in the Winter Session of 1899-1900:—

HISTORY OF MUSIC, ESPECIALLY OF THE LAST TWO CENTURIES.

Lecture I.—Music in the Middle Ages.
Lecture II.—Music in the time of the Renaissance.
Lecture III.—Music in the 17th Century.
Lecture IV.-XX.—Music in the 18th and 19th Centuries.

Once a week (Thursdays, 3-4), beginning 19th October. Twenty Lectures. Fee, One Guinea.

2. MUSICAL ANALYSIS.

Romanticism in Music, especially as exemplified in Schumann's compositions.

Once a week (Mondays, 3-4), beginning 16th October. Twenty Lectures. Fee, One Guinea.

3. HARMONY.

Twice a week (Tuesdays and Fridays, 3-4), beginning 17th October. Fee, Two Guineas.

4. ADVANCED HARMONY.

Twice a week (Tuesdays and Fridays, 4-5), beginning 17th October. Fee, Two Guineas.

5. COUNTERPOINT AND COMPOSITION.

Once a week (Mondays, 4-5), beginning 16th October. Fee, Two Guineas.

6. SERIES OF HISTORICAL CONCERTS.

Fee for these Concerts, Half-a-Guinea. Those attending any of the Music Classes are admitted free.

MUSIC CLASS-ROOM LIBRARY.

The Reading Room of this Library is open for the consultation and study of musical works and books on music to those attending the Music Classes, daily, except Saturday, from Two to Five o'clock.

MUSEUM.

The Museum of Musical and Acoustic Instruments is open to Music Students.

Regulations for Graduation in Music.

I. Two degrees in Music are conferred by this University, viz., Bachelor of Music (Mus. B.), and Doctor of Music (Mus. D.).

I. PRELIMINARY EXAMINATION.

II. 1. Every Candidate for the degree of Mus. B. must pass a preliminary examination in :—(1) English, including Geography and British History ; (2) Elementary Mathematics or Elementary Physics or Logic ; (3) any two of Latin, Greek, French, German, and Italian, but one at least must be a modern language.

2. The extent and standard of the preliminary examination is determined by the Senatus.

3. A degree in Arts not being a degree *honoris causâ tantum*, in any University of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court, after consultation with the Senatus, exempts from the preliminary examination ; and the Senatus has power to determine what examinations, other than those for the degree mentioned, will be accepted in whole or in part in place of the preliminary examination.

II. BACHELOR OF MUSIC.

University Attendance.

III. Candidates for the degree of Mus. B. must attend, in the University of Edinburgh during a whole Winter Session, a course or courses of instruction extending in all to not less than eighty Lectures, and including a course on the History of Music.

III. First Professional Examination.

IV. There is a First Professional Examination in Music in the following subjects :—

(1) Singing or performing upon some Musical Instrument.
(2) Reading at Sight.
(3) Elements of Music, including Musical Modes, and Scales, Notation, Measure, and *Tempo*.
(4) Harmony in not more than four parts.
(5) Elementary Counterpoint.
(6) Form: Sonata, Rondo, Fugue, and Minor Structures.
(7) Outlines of the History of Music.

The Ear Test will be applied to every Candidate.

IV. Second Professional Examination.

V. There shall be, at least one year after the candidate has passed the First Professional Examination, a second Professional Examination in Music and in Literature in the following subjects :—

(1) One of the following languages not already taken in the preliminary examination—French, German, Italian.
(2) Rhetoric and English Literature (including Prose Composition and a knowledge of Metrical Rules).
(3) Harmony in not more than five parts.
(4) Advanced Counterpoint.
(5) Canon in two parts, and Imitation and Fugue in not more than four parts.
(6) Form (Description of Structure and Character of Musical Forms, and Analysis of Musical Works).
(7) Elements of Instrumentation (Compass of the Orchestral Instruments, and of the Organ and Pianoforte).
(8) Critical Knowledge of certain prescribed Scores.
(9) Playing at Sight from easy Vocal and Instrumental Scores, and from Figured Bass.
(10) The History of Music.
(11) Acoustics in so far as connected with the Theory of Music, and Physiology of the Vocal Organs.

Each Candidate will also be required to submit the following exercises composed by himself :—

(*a*) A Solo Song with Pianoforte Accompaniment.
(*b*) A Four-part Vocal Composition.
(*c*) An Instrumental Composition (other than a Dance) for the Pianoforte or Organ, or for any Stringed or Wind Instrument with Pianoforte or Organ Accompaniment.

The extent and standard of examination is fixed by the Senatus. The examination is partly written and partly oral and practical.

V. Doctor of Music.

V. Bachelors of Music of this University, of not less than three years' standing, and not less than twenty-five years of age, may offer

themselves for the degree of Mus. D. under the following regulations:—The degree is given in three Departments, those of (1) Composers; (2) Executants; (3) Theorists or Historians; and Candidates may present themselves in one or more Departments.

VI. (1) Candidates for the degree of Mus. D. as Composers must submit a prescribed number of Vocal and Instrumental Compositions in the larger forms (such as Oratorio, Opera, Cantata, Symphony, Sonata, Overture). Each work must be the original and unaided composition of the Candidate, and must be accompanied by a declaration to that effect signed by the Candidate.

(2) Candidates will be examined in the following subjects:—

(*a*) The more recondite Contrapuntal Forms—Fugal Writing in more than four parts, &c.

(*b*) Instrumentation, including prescribed books on the subject.

(*c*) The works of the great Composers from Palestrina onwards.

VII. (1) Candidates for the degree of Mus. D. as Executants will be required to show their special skill in the execution of Solo and *ensemble* works in different styles. The works will be selected partly by the Candidates and partly by the examiners.

(2) The Candidates will be examined in sight-reading, and must give evidence of their power of playing Orchestral Scores, and will be required to invent Transitions and to modulate from one Key and Piece to another. They will further be required to pass an examination on the History and Literature of their special instrument, and on the method of teaching that instrument.

VIII. (1) Candidates for the degree of Mus. D. as Theorists or Historians must present one or more treatises on Theoretical or Historical subjects, which must be the result of research and original thought, not mere abstracts or compilations of existing works. They must be accompanied by a declaration signed by the Candidate that they are his own unaided work.

(2) Candidates will also be required to pass an examination (*a*) in the Theory and (*b*) in the History of Music.

The examination will be on a higher standard in the subject which the Candidate selects as his specialty.

IX. The examiners for the degree of Mus. D. are the same as for the degree of Mus. B.

It is competent to the University Court of the University of Edinburgh, after consultation with the Senatus, to modify from time to time the provisions as to curriculum hereinbefore contained, in case such modification shall be rendered desirable.

X. (1) The degree of Mus. D. may be conferred *honoris causâ tantum*.

(2) The honorary degree of Mus. D. will not be conferred by the Senatus on any person unless recommended by the Faculty of Music in a reasoned representation, submitted in writing to the Senatus, and

considered and approved by the Senatus at a special meeting at which not less than two-thirds of the members were present.

Preliminary Examination.

The Examination in English, Latin, Greek, Mathematics, French, German, and Italian, or such other language as the Senatus may approve, is the same as the Preliminary Examination in English, Lower Latin, Lower Greek, Lower Mathematics, French, German, and Italian, or other language approved by the Senatus, for the Degree in Arts; and the Examination in Logic and Physics is of the same standard as the Preliminary Examination in these subjects for Degrees in Medicine. The subjects are denoted in the Time-Table of the Preliminary Examinations for the Degree in Arts by the figure 4.

Candidates for Examination must apply at the Matriculation Office, University (Old) Buildings, for schedules, which must be completed and returned along with the fees, not later than 19th September 1899 and 1st March 1900 for the autumn and spring Examinations respectively.[1]

Candidates applying for information regarding the Preliminary Examination will be supplied with copies of the Regulations for the Preliminary Examinations for Degrees in Arts and in Medicine, which give the outlines and dates, &c., for the Preliminary Examination for Degrees in Music.

FEES.[1]

Preliminary Examination for each appearance, 10s. 6d.

Degree of Mus. B. is £10, 10s., divided as follows:—

First Professional Examination	£3	3	0
Second Professional Examination Literary part .	1	1	0
Do. Do. —Musical part .	3	3	0
For the Diploma (*payable before Graduation*) . .	3	3	0

Candidates who fail pay a fee of 10s. 6d. for each subject in which they are admitted to re-examination.

Candidates may pay the fees personally, or transmit them to T. Gilbert, University, Edinburgh, by *Post Office* or *Postal Orders*, or by *Bank Drafts*, crossed Union Bank of Scotland (Hunter Square Branch), Edinburgh, but not by cheques on private accounts.

[1] If names are not entered, and fees are not paid, on or before the stated dates, a late-entry fee of ten shillings must be paid before the Candidate can be admitted to examination.

DATES OF DEGREE EXAMINATIONS.

1900.

March 10. Names to be given in, Certificates shown, and fees paid, on or before this date.

First Professional Examination.

„ 26. Singing, Playing, Reading at Sight, and Ear Test, at 11; Harmony, at 2.
„ 27. Counterpoint, at 10; Elements of Music, at 2.
„ 28. History of Music, at 10; Form, at 2.

Second Professional Examination.

„ 29. Playing at Sight from Scores, at 10; Instrumentation and Critical Knowledge of Scores, at 11; Harmony, at 2.
March 27. Counterpoint, at 10; Canon and Fugue, at 2.
„ 28. History, at 10; Form, at 2.
„ 29. Acoustics and Physiology of the Vocal Organs, at 10; Rhetoric and English Literature, at 2.

GRADUATES IN MUSIC.

THE DEGREE OF BACHELOR OF MUSIC (MUS.B.).

13th April 1898.

Matthew Shirlaw.

14th April 1899.

Agnes Johnston. | *Christina Struthers.*

THE HONORARY DEGREE OF DOCTOR OF MUSIC (MUS.D.).

1895.

Ebenezer Prout, B.A.

1896.

Sir Alexander Campbell Mackenzie.

1899.

Hugo Riemann, Ph.D., Dozent at the University of Leipzig.

BUCHER SCHOLARSHIP.

By the will of Signor Theophile Bucher, his trustees were enjoined to pay over the residue of his estate, amounting to about £4000, to the University, for the purpose of founding one or more Scholarships in Music to be held by any young men born in Scotland, who may shew a natural talent for music and wish to make it their profession, for the purpose of improving their education, and enabling them to

prosecute the study of the science and art of Music in Italy, Germany, and France.

The Subjects of Examination for the Scholarship include Harmony, Rhythm, and Counterpoint, and the competition is open to young men between the ages of sixteen and twenty-five inclusively, who have been born in Scotland, and who either are, or have been, enrolled as students in the Faculty of Music in this University. The value shall not, after deducting the expenses of management and of examination, exceed £120 in any one year, the interest in excess of that sum to be added to the capital to form a second Scholarship. It is tenable for three years, and may be extended to a period not exceeding two years, during which time the scholars must prosecute the study of the science and art of Music in Italy, Germany, and France, as the Senatus, on the recommendation of the Faculty of Music, may determine. The Scholarship may be open in 1902. See Scheme of Administration, page 709 of CALENDAR for 1894-95.

1899. *John Petrie Dunn.*

FREDERICK NIECKS, Mus.D.,
Dean of the Faculty of Music.

JOINT BOARD OF EXAMINERS FOR THE SCOTTISH UNIVERSITIES.

A Joint Board of Examiners, which controls and supervises the Preliminary Examinations, is appointed annually by the University Courts of the four Scottish Universities, and holds office from 1st February to 31st January in the succeeding year. The Board sits for a year at each University in rotation, viz. :— Edinburgh, Glasgow, Aberdeen, St Andrews. The Principal of the University at which the Board sits is Chairman for the time, and the Secretary of the University Court is Convener.

Members of the Board, which meets at Aberdeen, for the current year (1st February 1899 to 31st January 1900) :—

Chairman—Principal Sir William D. Geddes, LL.D., D.Litt.

Convener—Robert Walker, M.A., University, Aberdeen.

Appointed by Edinburgh University—Oliver Elton, B.A. (English); Francis R. Jamieson, M.A. (Classics); Professor Chrystal, LL.D. (Mathematics and Dynamics); Charles Sarolea, D.Litt., Ph.D. (Modern Languages).

Appointed by Glasgow University—Professor Bradley (English); Professor Ramsay (Classics); Professor Gibson (Mathematics and Dynamics); Mons. F. J. Amours (Modern Languages).

Appointed by Aberdeen University—Professor Grierson, M.A. (English); Reynold A. Nicholson, M.A. (Classics); Hector M. Macdonald, M.A. (Mathematics and Dynamics); William Scholle, Ph.D. (Modern Languages).

Appointed by St Andrews University—Thomson Whyte, M.A. (English); Professor Burnet (Classics); Professor Butler (Mathematics and Dynamics); Herr Esser (Modern Languages).

The Joint Board from time to time issues Supplementary Regulations for the Preliminary Examination, and sets the papers, which are common to all the Scottish Universities. It also gives instructions to the Examiners with a view to secure adequate and uniform examination.

Preliminary Examination in Arts and Science.[1]

In addition to the Regulations, Sections III. to V. inclusively, pages 105-108, the Joint Board have made the following Supplementary Regulations :—

[1] See Examinations accepted as exempting from the Preliminary Examination, page 432.

1. *English* will include Grammar, Composition, Literature, History, and Geography.

(*a*) *Grammar* will include Analysis, Parsing, Derivation, and Correction of sentences.

(*b*) *Composition* will include an Essay and Paraphrasing.

(*c*) *Literature* will comprise a knowledge of certain prescribed books of two or three writers. Questions requiring a general knowledge of the life and works of the greater writers will not be set; but one or two questions may be set, giving an opportunity to candidates who have read widely in English Literature to show their knowledge.

The Books prescribed are:—For October 1899—1. Shakespeare, *Julius Cæsar*. 2. Scott, *Kenilworth*. 3. Matthew Arnold, *Selections* (Macmillan, ed. Macaulay). 4. Johnson, *Life of Pope*. For 1900—1. Shakespeare, *Richard III*. 2. Thackeray, *Esmond*. 3. Scott, *Marmion*.

(*d*) *History* will include a knowledge of one of the three following periods to be taken in successive years in the order herein mentioned, namely:—The Outlines of the History of both England and Scotland; (*a*) from the Roman occupation to 1603 (for October 1899); (*b*) from 1603 to the Union of the Parliaments in 1707 (for April and October 1900).

(*e*) *Geography* will include a general knowledge of the Geography of the World, and a special knowledge of the Geography of the British Empire.

2. The *Latin* Examination on the Higher Standard will be—Translation, Prose Composition, Grammar, and Sentences.

3. The *Greek* Examination on the Higher Standard will be—Translation, Sentences, and Grammar.

The passages for Translation both from Greek and Latin will include Prose and Verse.

4. The *Latin* Examination on the Lower Standard will be—Translation and Parsing, Prose Composition, Grammar, and Sentences.

5. The *Greek* Examination on the Lower Standard will be—Translation, Sentences, and Grammar.

In the Latin and the Greek papers, both on the Higher and Lower Standards, Candidates are required to satisfy the Examiners both in composition and in translation.

6. In the Examination in Mathematics on the Higher, the Intermediate, and on the Lower Standards, each question in Geometry will consist of two parts, of which one will be an easy deduction or illustrative exercise on the proposition set as bookwork.

The papers in Mathematics on the Higher Standard and on the Intermediate Standard will be devoted to the various subjects comprised in them as nearly as possible in the following proportions: two-fifths to *Geometry*, two-fifths to *Algebra* (including Arithmetic, if thought desirable), and one-fifth to *Trigonometry*.

Candidates for the Higher Standard may obtain full marks by doing

correctly about two-thirds of the questions set in each subject; but the Examiners will be entitled to reject a Candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

The pass mark for Candidates on the Intermediate Standard is fixed with reference to the total number of marks assigned to questions which fall under the syllabus of the Intermediate Standard; but such Candidates will receive credit for any question they may answer.

The paper in Mathematics on the Lower Standard will be devoted to the various subjects comprised, in as nearly as possible the following proportions: four-ninths to *Geometry*, three-ninths to *Algebra*, and two-ninths to *Arithmetic*.

Candidates may obtain full marks by doing correctly about two-thirds of the questions set in each subject; but the Examiners will be entitled to reject a Candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

7. The paper on Dynamics will be directed to test the Candidate's knowledge of the fundamental principles of the subjects included in it. As far as possible each question will consist of two parts, one of which will be a numerical or other simple illustrative example of the principle with which the other part of the question deals.

About one-seventh of the paper will be devoted to *Kinematics*, and the remainder of the paper will be assigned to *Kinetics*, *Statics*, and *Hydrostatics*, in as nearly as possible equal proportions.

Candidates may obtain full marks by doing correctly about two-thirds of the questions set in each section of the paper.

Dynamics shall include the following:—

(1) *Kinematics*.—Displacements, velocities, and accelerations of a moving point, with their compositions and resolutions. Translations of a rigid body. Relative velocity of two moving points.

(2) *Kinetics*.—The laws of motion, momentum, force, energy, work, —their measures in the British and C.G.S. systems of units. Change of units. Rectilinear motion of a particle under the action of constant forces. Free motion of a body under gravity, including projectiles. Atwood's machine. Impulsive forces. Direct impact of smooth spheres.

(3) *Statics*.—Composition and resolution of co-planar forces. Theory of co-planar couples. Conditions of equilibrium of forces in one plane. Centre of mass. Friction. Machines. Application of the principle of work to machines.

(4) *Hydrostatics*.—Definitions of *solid*, *fluid*, *liquid*, *gas*. Viscosity. Measure of the pressure at a point of fluid. Law of equable transmission of pressure. Laws of variation of pressure in heavy liquids. Resultant pressure of a heavy liquid on a plane surface, including the centre of pressure of a plane surface. Principle of Archimedes. Experimental determination of the densities of solids, liquids, and gases. Atmospheric pressure. The barometer. Boyle's law. The siphon, pumps for liquids, air pumps, and the diving-bell.

Questions may be set which involve the Trigonometry of right-angled triangles.

8. For the Examination in French and German—

Two papers will be set, both in French and German—an hour and a half being allowed for the first paper, and two hours for the second; the first paper to contain a passage for translation from English into French or German, with some short sentences of an idiomatic character; the second paper will contain a set of grammatical questions, two passages for translation into English (one in Verse, one in Prose), and a selection of Literary or Philological questions, from which the Candidate will be allowed to choose *one only*.

The questions on Literature will be confined year by year to certain groups of authors, as in the following scheme, viz:—

French.—In October 1899.—(*XVIIth Century*)—Pascal, Descartes, Corneille, Racine, Molière, Boileau, La Fontaine, Mme. de Sévigné, Bossuet, Fénelon, La Rochefoucauld, La Bruyère. In April and October 1900.—(*XVIIIth Century*)—Regnard, Lesage, Massillon, Saint Simon, Voltaire, Montesquieu, Vauvenarques, Marivaux, Jean Jacques Rousseau, Diderot, Buffon, Beaumarchais, Bernardin St Pierre, Mirabeau.

German.—In October 1899.—Klopstock, Wieland, Lessing, Herder, Bürger, Voss, Friedrich Leopold Stolberg, Holty, Leisewitz. In April and October 1900.—Goethe, Schiller, Klinger, Leng, Schubert, Arndt, Körner, Ruckert.

Candidates who, having taken in *Latin* or *Greek* the Examination on the Higher Standard have failed to pass on that Standard, but have obtained a percentage of marks equivalent to a pass on the Lower Standard, may be held by the Board to have passed the Examination on the Lower Standard.

Examinations Exempting from the Preliminary Examination in Arts and Science.

The Joint Board accept the following Examinations as exempting from the Preliminary Examination in Arts and Science, either *wholly* or *in part*:—

1. A Degree in Arts or in Science, not being an Honorary Degree, in any of the Universities of the United Kingdom, shall exempt from the Preliminary Examination in Arts or in Science, as the case may be.

2. For the Preliminary Examination in Arts and Science the Higher and Honours Grade Leaving Certificates of the Scotch Education Department in Latin, Greek, and Mathematics will be accepted as equivalent to the Higher Standard in each of these subjects, as prescribed by the Arts Regulations, and the Lower Grade Certificate to the Lower Standard; the Higher and Honours Grade Leaving Certificate in

English, in Modern Languages, and in Dynamics will be accepted as equivalent to the standard prescribed for each of these subjects by the Arts Regulations.

3. A Certificate of having passed in the Honours or First Division in English in the London University Matriculation Examination will be accepted as equivalent to English in the Arts and Science Preliminary Examination; and the Joint Board also accepts for the Preliminary Arts and Science Examination (1) London University Matriculation Mathematics as equivalent to Lower Mathematics; (2) London University Matriculation Mechanics as equivalent to Dynamics; and (3) London University Intermediate Mathematics as equivalent to Intermediate and Higher Mathematics.

4. *Oxford University Senior Local Examinations*, if passed with distinction, will be accepted as exempting *pro tanto* in Higher Latin, Higher Greek, French, German, and Intermediate Mathematics; also in English provided that in English the candidate has passed with distinction in division 1, and in division 3, or 4, or 5; a pass without distinction will be accepted *pro tanto* for Lower Latin, Lower Greek, and Lower Mathematics.

5. *Oxford University Higher Examination for Women* will be accepted as exempting *pro tanto* for the Arts and Science in the case of Higher Latin, Higher Greek, English, and Lower Mathematics; and if with distinction, for French and German, and Higher Mathematics.

6. *Cambridge University Local Examinations:—*

(*a*) *Junior Locals.* The pass with distinction will be accepted for Lower Mathematics, provided the Candidate has passed in Books I., II., and III. of Euclid, and in Quadratic Equations.

(*b*) *Senior Locals.* The pass will be accepted as exempting *pro tanto* for Lower Latin, and Lower Greek, and for Higher Mathematics; and if with distinction, for English, Higher Latin, Higher Greek, and Modern Languages.

7. *Cambridge University Higher Local Examinations* will be accepted *pro tanto.*

8. *Oxford and Cambridge Schools Examination Board.*

The Lower Certificate will be accepted for Lower Mathematics, provided the candidate has passed in three books of Euclid, and as far as Quadratic Equations in Algebra.

Higher Certificate. The pass will be accepted for Lower Latin, Lower Greek, and Lower Mathematics, provided the latter includes Elementary and additional Mathematics; if with distinction, will be accepted for Higher Latin, Higher Greek, French, German, and Higher Mathematics.

9. *Victoria University.* The Preliminary Examination will be held as exempting from the Preliminary proper, but not from the Examination required for admission to a graduating class in any language. (See Section iv., Sub-sections (2) (3) of Regulations, pages 106 and 107.)

10. For the Preliminary Examination in Arts and Science, the Deans of the Faculties concerned are empowered to accept, *pro tanto*, such examinations qualifying for entrance to recognised Colonial and Foreign Universities (although not included in the list of Equivalent Examinations issued by the Joint Board) as they consider to be sufficient, but on condition that they afterwards report each case to the Senate, and to the Joint Board as soon as possible.

Preliminary Examination for Degrees in Medicine.[1]

Regulations for the Preliminary Examination for Degrees in Medicine and Surgery, Supplementary to Sections III.-VI. inclusively, pages 353 and 354 hereof, abridged from the Regulations of the Joint Board.

The papers set in Latin, Greek, and Mathematics are the same as those set on the Lower Standard in these subjects in the Arts and Science Preliminary Examination.

These are defined in the Regulations relating to the Arts and Science Preliminary, as follows:—

The *Latin* Examination on the Lower Standard will be—Translation and Parsing, Prose Composition, Grammar, and Sentences.

The *Greek* Examination on the Lower Standard will be—Translation, Sentences, and Grammar.

In the Latin and Greek papers, candidates are required to satisfy the Examiners both in composition and in translation.

Mathematics on the Lower Standard will comprise:—

(1) Arithmetic, including Vulgar and Decimal Fractions, Proportion, Percentage, Square Root, Simple Interest.

(2) Algebra, including Fractions, Factors, Square Root, Equations of the First Degree, Simultaneous Equations of the First Degree, Easy Quadratic Equations, Problems leading to the above Equations.

(3) Geometry—Euclid, Books I., II., and III. (or their equivalents), with Easy Deductions. Demonstrations other than Euclid's will be accepted if they assume no propositions which in Euclid's order are subsequent to the proposition under consideration.

The paper in Mathematics will be devoted to the various subjects comprised in as nearly as possible the following proportions: four-ninths to *Geometry*, three-ninths to Algebra, and two-ninths to Arithmetic.

Candidates may obtain full marks by doing correctly about two-thirds

[1] See Examinations accepted as exempting from the Preliminary Examination, page 435.

of the questions set in each subject; but the Examiners will be entitled to reject a Candidate who makes in any subject less than a certain minimum of the marks allotted to that subject.

In *English* no set books are prescribed, nor is a general knowledge of the life and works of the greater authors expected of Candidates, but one or two questions may be set, giving an opportunity to Candidates to show a knowledge of famous literary works. The historical questions will not be confined to any one period, but will cover the whole of British History, and will be set in such a way as to give an opportunity to Candidates who have confined their studies to a single period to show their knowledge. A single three hours' paper will be set, containing an Essay, a Paraphrase, two questions on History, two on Geography, four on Grammar (including Correction of Sentences, Parsing, Analysis of Sentences, and Derivations), two of a literary and general kind. Eight answers will be required. The Essay, the Paraphrase, one answer on History, and one on Geography will be compulsory.

French and German.—One paper will be set in French and one in German. The papers will be of a Lower Standard than those set in these subjects in the Arts and Science Preliminary. The time allowed for each of these papers will be three hours. The paper in each subject will comprise questions in Grammar, translation into English, a piece of English, and some short sentences in English of an idiomatic character for translation.

It shall be in the option of any Candidate for the Medical Preliminary to take the papers set on the Higher Standard for the Arts Preliminary in any of the subjects. (See Arts Regulations.)

Candidates who, having taken *English*, *Latin*, *Greek*, *Mathematics*, or a *Modern Language*, on the Higher Standard, as prescribed by the Regulations for the Arts and Science Preliminary, have obtained a satisfactory percentage of marks, will be held to have passed the Medical Preliminary in these subjects, provided that all the required subjects are passed at not more than two Examinations.

Examinations Accepted as Exempting from the Preliminary Examination in Medicine.

Provided always that the Regulations of the General Medical Council regarding the Registration of Students of Medicine be complied with.

1. In terms of the Regulations for Degrees in Medicine and Surgery, "a Degree in Arts or in Science (not being a Degree *honoris causa tantum*) in any of the Universities of the United Kingdom, or in any Colonial or Foreign University, specially recognised for the purpose by the University Court, will exempt from the Preliminary Examination."

In virtue of the powers conferred on them by the Medical Regulations, Section VI., page 354, the Joint-Board have resolved as follows:—

2. Any Candidate who produces a Certificate of having passed the

Preliminary Examination in Arts or Science in any Scottish University, either at the University Examination or through the Leaving Certificates of the Scotch Education Department, or partly at the University Examination, and partly through the Leaving Certificates, will be held to have passed the Preliminary Examination for Medicine, provided that the Examination has included the specified subjects of General Education as required under the Regulations of the General Medical Council, and by the Regulations for Graduation in Medicine and Surgery (Sections III.-VI. inclusive).

3. A Candidate who has passed the Arts and Science Preliminary Examination of the Joint Board in any subject (Higher Grade where there is more than one) recognised for the Medical Preliminary Examination, shall be exempted from further examination in that subject in the aforesaid Preliminary Examination.

4. A Candidate who has obtained the Leaving Certificate (Honours or Higher Grade) of the Scotch Education Department in any subject recognised for the Medical Preliminary Examination, shall be exempted from further examination in that subject in the aforesaid Preliminary Examination.

The Regulation that all the subjects of the Examination shall be passed at one or not more than two Examinations shall not be held to apply to the above cases, 2, 3, and 4. But Candidates complying with these Rules (2, 3, and 4) must obtain a University Certificate specifying the Examinations passed by them which have been accepted as equivalents to the Preliminary, and must present said Certificate to the Medical Registrar in order to registration.

Further, each such Candidate when applying for said Certificate must, if he has not entered for any part of the Preliminary, produce a Matriculation Card from some one of the Scottish Universities.

5. Lower Grade Leaving Certificates of the Scotch Education Department will only be accepted as exempting from the Medical Preliminary Examination, provided the examinations in all the requisite subjects have been passed at one or not more than two Examinations.

6. The following English and Irish University Examinations will be accepted (provided they include all the subjects required under the Regulations of the General Medical Council, and prescribed by the Medical Ordinances of the Scottish Universities Commissioners, see Sections III.-VI. inclusive of Regulations for Graduation in Medicine and Surgery), viz. :—

Oxford. Responsions, or Moderations—Provided the Candidate pass the Examination of the Joint Board in English.

Senior Local Examinations will be accepted *pro tanto*, provided that, as regards English, the Certificates shall bear that the Candidate has passed in Division 1 of the subject, and in either Division 3, 4, or 5.

Higher Examination for Women will be accepted *pro tanto*.

Cambridge. Previous Examination—Provided that Candidates who have passed it prior to Michaelmas 1896 shall pass the Examination of the Joint Board in English. If passed after Michaelmas 1896, the Previous Examination will be accepted as exempting *in toto.*

Senior Local Examinations will be accepted *pro tanto.*

Higher Local Examinations will be accepted *pro tanto.*

Oxford and Cambridge Schools Examination. Higher Certificate will be accepted *pro tanto,* provided that, as regards Mathematics, the Certificate shall bear that the Candidate has passed in both Elementary and Additional Mathematics.

London University. Matriculation Examination.

Dublin, Trinity College. Public Entrance Examination.

Royal University of Ireland. Matriculation Examination.

Victoria University. Preliminary Examination; Entrance Examination in Arts.

By *pro tanto* is here meant that a certificate of having passed in the Examination referred to, in any subject required for the Medical Preliminary Examination, shall, as regards that subject, exempt from further Examination in the said Preliminary Examination, provided that all the required subjects shall be passed at one or not more than two Examinations.

7. The Examinations of the following Indian, Colonial, and Foreign Universities and Colleges, will be accepted (provided the Examinations include all the subjects required by the General Medical Council, and prescribed by the Medical Ordinances of the Scottish Universities Commissioners—see Sections III.-VI. inclusive of Regulations for Graduation in Medicine and Surgery), viz. :—

Universities of (1) *Calcutta,* (2) *Madras,* (3) *Bombay,* (4) *Allahabad,* and (5) *Panjab.*—Entrance Examination.

Universities of (1) *Cape of Good Hope.*—Matriculation Examination; (2) *Tasmania*—Matriculation Examination; (3) *New Zealand*—Matriculation and Medical Preliminary Examinations; (4) *Melbourne*—Matriculation Examination; (5) *Sydney*—Matriculation Examination; (6) *Adelaide*—Matriculation Examination, or its substitute, the Senior or Junior Public Examination.

The Provincial Education Department of Ontario.—Departmental Pass Arts Matriculation Examination.

Trinity University, Toronto.—Matriculation Examination

The University of Toronto.—Senior or Junior Matriculation Examination.

Queen's College and University, Kingston.—Matriculation Examination.

M'Gill University.—Matriculation Examination.

King's College, Windsor, Nova Scotia.—Responsions.

Dalhousie College Halifax.—Matriculation Examination.

Mount Allison College, Sackville, New Brunswick.—Matriculation Examination.

The University of Winnipeg.—Preliminary Examination in Arts.

Victoria College, Upper Canada.—Matriculation Examination.

The University of Halifax, Nova Scotia.—Matriculation Examination.

The University of Fredericton, New Brunswick.—Matriculation Examination.

The Western University of Ontario.—Matriculation Examination.

University of Manitoba.—Previous Examination.

Codrington College (Barbados).—English Certificate for Students of two years' standing, and Latin Certificate, or "Testamur."

Germany and other Continental Countries.—Gymnasial Abiturienten-Examen, and corresponding Entrance Examinations to the Universities.

8. In the case of Candidates for the Medical Preliminary Examination, who hold qualifications from Foreign or Colonial Bodies, other than Universities, whose certificates are not included in the list of Equivalent Examinations issued by the Joint Board, a Committee in each University, consisting of the Deans of the Faculties of Arts, Science, and Medicine, is empowered to accept such certificates, if it deems them sufficient, provided that all such cases are reported to the Joint Board at their meeting next following.

Class Prize and Honours Lists.

FACULTY OF ARTS.

SUMMER SESSION, 1898.

HUMANITY.

HONOURS CLASS—HONOURS GRADUATION HALF-COURSE.

FIRST-CLASS CERTIFICATES OF MERIT.—1. Douglas G. Robertson, Edinburgh (*Medal*); 2. William H. Nelson, Rosewell; 3. James B. Jamieson, Portobello.

SECOND-CLASS CERTIFICATES OF MERIT.—4. Norman J. Henderson, Edinburgh; 5. Isabella W. Stevenson, Edinburgh.

SENIOR CLASS.

FIRST-CLASS CERTIFICATES OF MERIT. 1. George Butler, Darlaston, England (*Medal*); 2. Annabella G. Clark, Edinburgh, and Robert Taylor, Scotland—equal; 4. Alexander C. Murphy, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—5. Thomas A. L. Cairns, Portobello; 6. John G. Sutherland, Wick; 7. Charles B. Milne, Aberdeen; 8. Daniel Allison, Carluke; 9. Flora O'Riordan, Edinburgh.

LATIN PROSE COMPOSITION.—1. Robert Taylor; 2. George Butler.

ROMAN HISTORY.—1. George Butler; 2. Thomas A. L. Cairns.

JUNIOR CLASS—PRELIMINARY COURSE.

FIRST-CLASS CERTIFICATES OF MERIT.—1. Charles W. S. Taylor, Edinburgh; 2. Clerk Ranken, Edinburgh; 3. Mary C. Jolly, Edinburgh.

SECOND-CLASS CERTIFICATES OF MERIT.—4. Margaret A. Herford, Lancashire; 5. John Wishart, Edinburgh; 6. Margaret Andrew, Edinburgh.

LATIN PROSE COMPOSITION.—1. Clerk Ranken; 2. Margaret A. Herford.

JAMES MILL, M.A., *Lecturer*

GREEK.

HONOURS CLASS.

FIRST-CLASS CERTIFICATE OF MERIT.—1. Douglas G. Robertson, Edinburgh.

SENIOR CLASS.

No Honours List.

JUNIOR CLASS.

SECOND-CLASS CERTIFICATE OF MERIT.—Hugh Oswald, Kirkcaldy.

A. DOUGLAS THOMSON, M.A., D.Litt., *Lecturer.*

ENGLISH LITERATURE (Honours Class).

EXAMINATION.

First-Class Certificates.—1. James Melville, Edinburgh (*Medal*); 2. Margaret Cleghorn, Alyth; 3. Alys Beatrix Biscombe, Calais.

Second-Class Certificates.—4. Richard Hunter Moar, Stromness; 5. Mary Gordon Williamson, Allahabad; 6. William Geddie, Edinburgh.

ESSAY.

First-Class Certificates.—1. William Geddie, Edinburgh (*Medal*); 2. Margaret Cleghorn, Alyth; 3. James Melville, Edinburgh; 4. Mary Gordon Williamson, Allahabad.

Second-Class Certificates.—5. Alys Beatrix Biscombe, Calais; 6. Richard Hunter Moar, Stromness.

G. GREGORY SMITH, M.A., *Lecturer.*

ELEMENTARY HEBREW.

First-Class Certificates.—1. James A. Glover (*Medal*); 2. M. F. Simpson.

Second-Class Certificates.—3. A. Gordon Cairns; 4. G. H. Donald.

ELEMENTARY ARABIC.

First-Class Certificates.—Arthur Cotter and Alex. Flint, M.A.

WM. B. STEVENSON, B.D.
University Assistant in Semitic Languages.

MATHEMATICS.

HONOURS

First-Class Certificates.—W. D. R. Prentice, Edinburgh (*Prizeman and Medallist*); J. A. Ferguson, Edinburgh; and J. G. Sutherland, Wick.

Second-Class Certificates.—T. P. W. Barty, Scotland; J. S. Ross, Edinburgh; H. S. Simpson, Virginia, U.S.A.; and G. Wilkie, Leven.

HIGHER SENIOR.

Prize and First-Class Certificate.—T. Davidson, Edinburgh.

Second-Class Certificates.—J. B. Jamieson, Portobello, and Miss M. Tweedie, Edinburgh.

LOWER SENIOR.

Prizes and First-Class Certificates.—1. D. G. Robertson, Edinburgh; 2. W. H. Nelson, Rosewell; 3. J. S. Kinghorn, Edinburgh; 4. W. Pryde, Edinburgh; 5. J. Macrae, Kintyre; 6. F. J. Gordon, Edinburgh.

Second-Class Certificates.—J. S. Clark, Edinburgh; J. Crerar, Cumberland; T. G. C. Gifford, Edinburgh; J. M. Hendrie, Dumfries; Miss B. K. Hogg, Egypt; A. W. M'Clymont, Edinburgh; E. Shearer, Edinburgh; F. D. Sime, Fife; A. J. Sturrock, Edinburgh.

CHAS. TWEEDIE, M.A., B.Sc., *Lecturer.*

ELEMENTARY DYNAMICS.

First-Class Honours.—C. T. Walker, Tasmania.

Second-Class Honours.—G. Wilkie, Leven, Fife.

C. G. KNOTT, D.Sc., *Lecturer.*

ADVANCED NATURAL PHILOSOPHY (TUTORIAL).

Prize and First-Class Certificate.—1. A. Milne.

Second-Class Certificates.—2. R. D. Bell and R. H. Macnair—equal; 4. A. Waddell and H. Wilkie—equal.

ADVANCED EXPERIMENTAL PHYSICS.

Prizes and First-Class Certificates. 1. A. Milne; 2. R. D. Bell, S. Swaminadhan.

W. PEDDIE, D.Sc., *Lecturer.*

MODERN (EUROPEAN) HISTORY—1715-1848.

1. James Crerar, Cumberland; 2. J. H. Cattanach, Edinburgh; 3. Kenneth N. Knox, India (*Prizes*); 4. W. E. Wait, Bournemouth; 5. J. Chalmers Leighton, M.A., B.Sc., Dundee; 6. A. Russell Simpson, Edinburgh.

Distinguished (*a*) in the Examinations—Alexander Flint; (*b*) in the Essay—W. I. D. Hardinge.

D. P. HEATLEY, *Lecturer.*

WINTER SESSION, 1898-99.

LATIN.

HONOURS CLASS.

First-Class Certificates of Merit.—1. Charles G. Mackay, Pitlochry, and Christina M. Ross, Arbroath—equal (*Medals*); 3. W. D. R. Prentice, Portobello; 4. Hector J. Anderson, Ardlui, and George V. Dunnett, Kilmarnock—equal (*Prizes*); 6. Alex. Cunnison, Edinburgh; 7. Henry C. Liddle, Edinburgh.

Second-Class Certificates of Merit.—8. Francis H. T. Gray, Elgin; 9. Isabella W. Stevenson, Edinburgh; 10. Donald J. Boyd, Edinburgh; 11. Douglas G. Robertson, Edinburgh; 12. Alexander Duthie, Boston, Mass.; 13. Joseph H. Cattanach, Edinburgh.

Prose Composition.—1. Hector J. Anderson; 2. Christina M. Ross (*Prizes*).

HONOURABLE MENTION.—Isabella W. Stevenson.
LATIN ESSAY.—Augusta M. C. Davidson.
VERSE COMPOSITION.—W. D. R. Prentice.
HISTORY OF LITERATURE.—Augusta M. C. Davidson and Christina M. Ross—equal.
ENGLISH ESSAY.—C. G. Mackay.
VACATION EXERCISE (Summer 1898)—J. Y. Bell.
ENTITLED TO FIRST-CLASS CERTIFICATES, BUT NOT COMPETING. James Y. Bell, Edinburgh; James Crerar, Cumberland; and Augusta M. C. Davidson, Edinburgh.

SENIOR CLASS.

FIRST-CLASS CERTIFICATES OF MERIT.—1. George W. Chrystal, Edinburgh; 2. C. D. O. Barrie, Dumfries, and Charles Goodall, Edinburgh—equal; 4. Wilhelmina G. Jameson, Edinburgh (*Medals*); 5. Elizabeth B. Mitchell, Edinburgh, and George A. Waters, Thurso—equal; 7. Walter Booth-Gravely, Edinburgh, and James J. Macpherson, Newtonmore—equal; 9. Robert Maciver, Stornoway, and Catherine A. Nicolson, Edinburgh—equal; 11. J. M. Sutherland, Edinburgh; 12. Helen M'Lauchlin, Edinburgh (*Prizes*); 13. James A. Gunn, Kirkwall; Agnes A. Macgregor, Dumfries; and Charles M'Neil, Edinburgh—equal; 16. P. B. M. Macaulay, Irvine; 17. John Smith, Ayr; William Landells, Dumfries; W. B. Brander, Edinburgh; and George G. Campbell, Inverness—equal; 21. David Lees, Ayr.

SECOND-CLASS CERTIFICATES OF MERIT.—22. Jemima Meiklejohn, Ross-shire; 23. Harriet S. Nisbet, Edinburgh; 24. J. Randolph Davidson, Camelon; 25. Jeannie C. Rait, Falkirk; Frank Ross, Coupar-Angus; Peter Ross, Thurso; 28. R. F. Lindsay, Pittenweem; 29. A. J. Ross, Edinburgh; 30. W. J. B. Selkirk, Aberdeen; 31. A. M. Shaw, Inverness; 32. E. H. Wishart, Prestonkirk; 33. Robert L. Wilson, Lismore; 34. Mary G. S. Wallace, Edinburgh, and John Macalpine, Edinburgh—equal; 36. W. H. Allan, Edinburgh; 37. W. R. Durham, Thurso; 38. Elizabeth F. Porter, Arbroath; 39. J. C. Graham-Cumming, Grangemouth; 40. William C. Robertson, Edinburgh; 41. B. H. Watt, Elgin; 42. Jessie R. Smith, Craigellachie, and David Mathieson, Edinburgh—equal; 44. D. K. Cunnison, Edinburgh; 45. Geo. A. Smillie, Philpstoun, and M. Amy S. Thomson, Edinburgh—equal.

LATIN PROSE COMPOSITION.—1. C. Goodall; 2. G. W. Chrystal and Elizabeth B. Mitchell—equal; 4. Wilhelmina G. Jameson (*Prizes*).
HONOURABLE MENTION.—5. W. Booth-Gravely and J. M. Sutherland—equal; 7. Catherine A. Nicolson; 8. J. M. Mackintosh.
HISTORY AND LITERATURE.—1. G. W. Chrystal (*Prize*).
HONOURABLE MENTION.—2. Wilhelmina G. Jameson; 3. C. D. O. Barrie and G. A. Waters—equal.
VERSE COMPOSITION.—G. Goodall (*Prize*).

JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Lilias MacGregor, Dumfries (*Medal*); 2. Charles M'Pherson, Laggan; 3. Alexander Maclennan, Kingussie; 4. Alexander H. Gardner, Edinburgh; 5. Mary H. Lawson, Edinburgh; 6. Jessie Rennie, Addiewell; 7. Mary E. M. Clark, Kirkcaldy.

SECOND-CLASS CERTIFICATES OF MERIT.—8. Andrew Mackie, Dunbeath; 9. John L. Pirie, Edinburgh; 10. Norma M. Findlay, Dundee; 11. Elizabeth B. Murray, Edinburgh; 12. Grace N. Aitken, Edinburgh; 13. Thomas Steven, Edinburgh; 14. David B. Nicol, Arbroath; 15. John Gass, Ecclefechan; 16. Margaret Sibbald, Dundee.

LATIN PROSE COMPOSITION.—1. Lilias MacGregor (*Prize*).

HONOURABLE MENTION.—2. Charles M'Pherson and Alexander Maclennan—equal; 4. Mary H. Lawson; 5. Alexander H. Gardner; 6. Jessie Rennie; 7. Grace N. Aitken; 8. James A. Todd, Edinburgh.

LITERATURE AND HISTORY.—1. Norma M. Findlay (*Prize*).

HONOURABLE MENTION.—2. Lilias MacGregor and Alexander Maclennan—equal.

W. R. HARDIE, M.A., *Professor.*

GREEK.

HONOURS CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. J. Y. Bell, Edinburgh (*Medal*); 2. C. G. Mackay, Pitlochry, and J. S. Ross, Edinburgh—equal; 4. H. J. Anderson, Ardlui; 5. W. D. R. Prentice, Joppa.

COMPOSITION PRIZES.—1. J. Crerar, Cumberland; 2. J. Y. Bell.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Charles Goodall, Ayrshire (*Medal*); 2. George W. Chrystal, Edinburgh; 3. A. M. Shaw, Inverness; 4. C. D. O. Barrie, Dumfries; 5. Wm. B. Brander, Edinburgh; P. B. M. Macaulay, Irvine; R. M. Maciver, Stornoway; and J. M. Sutherland, Ayr—equal; 9. J. J. Macpherson, Kingussie, and John Smith, Ayr—equal; 11. Jane Anderson, Orkney, and W. Booth-Gravely, Edinburgh—equal; 13. James A. Gunn, Kirkwall, and C. H. Moore, Musselburgh—equal; 15. G. A. Waters, Thurso.

SECOND-CLASS CERTIFICATES OF MERIT.—16. John MacLeod, Edinburgh; 17. David Lees, Ayr, and C. M'Neill, Stranraer—equal; 19. G. G. Campbell, Inverness; 20 Elizabeth B. Mitchell, Edinburgh, and W. J. B. Selkirk, Aberdeen—equal; 22. S. Robertson, Edinburgh; 23. E. H. Wishart, Prestonkirk; 24. A. B. Lorimer, Dumfriesshire; 25. G. A. Smillie, Philpstoun; 26. J. M. M'Intosh,

Edinburgh; 27. D. K. Cunnison, Edinburgh; 28. R. F. Lindsay, Pittenweem.

COMPOSITION PRIZES.—1. C. Goodall.

HONOURABLE MENTION.—2. John Smith and J. M. Sutherland—equal.

HISTORY PRIZE.—George W. Chrystal.

HONOURABLE MENTION.—Wm. B. Brander.

LITERATURE PRIZE.—George W. Chrystal.

HONOURABLE MENTION—A. M. Shaw.

JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES OF MERIT.—1. Charles MacPherson, Laggan (*Medal*); 2. Alexander Maclennan, Kingussie.

SECOND-CLASS CERTIFICATES OF MERIT.—3. Duncan M'Diarmid, Callander; 4. Andrew J. Scott, Leith.

HISTORY AND LITERATURE PRIZE.—C. MacPherson.

COMPOSITION PRIZE.—C. MacPherson.

HONOURABLE MENTION.—Alex. Maclennan.

GRAMMAR PRIZE.—A. J. Scott.

S. H. BUTCHER, LL.D., *Professor.*

RHETORIC AND ENGLISH LITERATURE.

HONOURS CLASS (FULL COURSE).

PRIZE AND FIRST-CLASS CERTIFICATE.—1. James Melville, Edinburgh (*Medallist*).

FIRST-CLASS CERTIFICATES—2. John Purves, Scotland, and Mary G. Williamson, Allahabad—equal.

SECOND-CLASS CERTIFICATES.—4. Thomas Paterson, Edinburgh; 5. C. F. Grant, Dundee; 6. John MacRae, Scotland.

ORDINARY CLASS.

CLASS PRIZES AND FIRST-CLASS CERTIFICATES.—1. David C. Davidson, Scotland; 2. Thomas Nicol, Scotland (*Medallists*); 3. John Inch Low, Blairgowrie; 4. James Crabb Watt, Scotland; 5. James Anderson, Forres; 6. J. R. Hutton, Birkenhead, and Richard H. Moar, Stromness—equal; 8. A. W. M'Clymont, Roxburghshire; 9. Adam Mackay, Forfar; 10. F. H. T. Gray, Elgin; 11. A. F. M. Clark, Kirkcaldy; 12. Elizabeth H. C. Pagan, Scotland; 13. Nellie S. Shearer, Thurso; 14. James W. Somerville, Edinburgh; 15. Norma M. Findlay, Scotland; 16. James Bryce Jamieson, Scotland.

SECOND-CLASS CERTIFICATES.—17. James Murray, Dundee; 18. John M. Hendrie, Scotland, and J. C. Rait, Pitlochry—equal; 20. Alfred J. Sturrock, Scotland; 21. David H. Ash, Perth, and William M'Gregor, Scotland—equal; 23. Charles F. Allan, Scotland; George Butler, England; R. D. S. Grant, Wick; and Henry M. Strong, Tunbridge Wells—equal; 27. William Jardine,

Haddington; 28. Margaret Sibbald, Scotland; 29. Helen A. Lawson, Alloa; 30. Mary M. Drummond, Dundee; 31. Helen S. Neill, Edinburgh; 32. Absalom Deans, England, and John Garrlock, Orkney—equal; 34. Marshall M. Craig, Scotland, and Macduff M. Simpson, Philadelphia—equal; 36. Bessie K. Hogg, Egypt; 37. David K. Bogie, Edinburgh, and Marion J. G. Ridpath, Edinburgh—equal; 39. Peter M. Curle, Edinburgh, and Janie Middleton, Scotland—equal; 41. James B. Rodger, Scotland.

Essay Prizes and First-Class Certificates.—1. David C. Davidson, Scotland; 2. Thomas Nicol, Scotland (*Medallists*); 3. George Butler, England; 4. Richard H. Moore, Stromness, and C. W. T. Wardrop, Scotland—equal; 6. Elizabeth H. C. Pagan, Scotland; 7. James Anderson, Forres; 8. Adam Mackay, Forfar; 9. J. R. Hutton, Birkenhead; 10. James Crabb Watt, Scotland.

Second-Class Certificates.—11. Charles F. Allan, Scotland, and A. W. M'Clymont, Roxburghshire—equal; 13. John Inch Low, Blairgowrie; 14. James Boyd Jamieson, Scotland; 15. Henry M. Strong, Tunbridge Wells; 16. A. F. M. Clark, Kirkcaldy; 17. John Garriock, Orkney; 18. Norma M. Findlay, Scotland; 19. A. G. Anderson, Forres, and Alfred J. Sturrock, Scotland—equal; 21. Jean M. Forrest, Scotland, and F. H. T. Gray, Elgin—equal; 23. Jeanie C. Rait, Pitlochry; 24. Marshall M. Craig, Scotland; 25. David K. Bogie, Edinburgh; R. D. S. Grant, Wick; and A. M'Intosh, Blairgowrie—equal.

Prize for Verse.—John Inch Low, Dundee.

GEORGE SAINTSBURY, M.A., *Professor.*

OLD AND MIDDLE ENGLISH.

HONOURS COURSE.

First-Class Certificates.—1. William Geddie, Edinburgh (*Medal and Early English Text Society's Prize*); 2. Thomas Paterson, Edinburgh.

Second-Class Certificate.—3. John Purves, Edinburgh.

Special Prize (*presented by the Early English Text Society*) and First-Class Certificate for Work during First Half-Course (Oct.-Dec.).—Edith Hooper, Tenby.

G. GREGORY SMITH, M.A., *Lecturer.*

FRENCH.

HONOURS CLASS.

Prizes and First-Class Certificates.—1. Bessie Robson and Mary Tweedie—equal (*Medallists*).

Second-Class Certificates.—3. Robert Taylor and Jessie Linton—equal; 5. Mary Clark and Alexander Flint—equal; 7. Isabella Ogilvie; 8. Jessie Lees; 9. Johanne Thomsen.

ORDINARY CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Mary Melvin and Lilias MacGregor—equal (*Medallists*); 3. George M. Harper; 4. Hugh Miller.

FIRST-CLASS CERTIFICATES.—5. Helen S. Neill; 6. Margaret M. Cameron; 7. K. M. Sutherland Graeme; 8. Flora O'Riordan; 9. Thomas A. Temple; 10. Annabella G. Clark; 11. Nellie M. Gow; 12. Annie C. Craig; 13. Margaret J. Thompson; 14. Agnes M'Gregor; 15. Margaret Alexander.

SECOND-CLASS CERTIFICATES.—16. Lizzie Drummond; 17. Wm. Landells; 18. M. N. C. Urquhart; 19. Annie M'Cugan; 20. John M'Alpine; 21. John Logan; 22. Robert J. Honue; 23. Elizabeth J. Ross; 24. Jessie A. Menzies; 25. Williamina Smith.

CHAS. SAROLEA, Ph.D., D.Litt., *Lecturer.*

GERMAN.

HONOURS CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Bessie H. A. Robson, Edinburgh, and R. Taylor, Calcutta—equal (*Medals and Prizes*); 3. Jessie A. Linton, Edinburgh; 4. Isabella Ogilvie, Scotland.

ORDINARY CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. John Lees, M.A., Scotland, and B. H. Richardson, M.A., London—equal (*Medals and Prizes*).

FIRST-CLASS CERTIFICATES.—3. H. C. Norman, England; 4. George Milne Harper, Edinburgh; 5. Harriet Nisbet, Edinburgh

SECOND-CLASS CERTIFICATES.—6. Georgina K. H. Robson, Edinburgh; 7. Lizzie Y. Drummond, Scotland; Jenny Marr Murray, Scotland; and Mary S. Miller, Edinburgh—equal; 10. Elizabeth F. Porter, Arbroath; 11. Jessie Ann Menzies, Scotland.

O. SCHLAPP, Ph.D., *Lecturer.*

SANSKRIT.

SENIOR CLASS.

FIRST-CLASS CERTIFICATE OF MERIT.—H. B. Joshi (*Class Medal*).

JUNIOR CLASS.

FIRST-CLASS CERTIFICATE OF MERIT.—H. C. Norman (*Class Medal and Muir Prize of £5*).

J. EGGELING, Ph.D., *Professor.*

CELTIC LANGUAGE AND LITERATURE.

CELTIC CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. Neil Ross, Glendale (*Medallist*); 2. Alan O. Anderson, Edinburgh, and Roderick Barron, Laggan—equal.

ADVANCED CELTIC CLASS.

PRIZE AND FIRST-CLASS CERTIFICATES.—1. Alan O. Anderson, Edinburgh (*Medallist*); 2. Roderick Barron, Laggan.

GAELIC CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. J. A. A. Morrison, Kirkmichael (*Medallist*); 2. William Murdie, Assynt.

SECOND-CLASS CERTIFICATES.—Daniel A. Morrison, Kirkmichael; William Macleod, Assynt.

SPECIAL PRIZES.—£10, 10s. given by the Highland Society of London—Neil Ross. Book Prizes, given by John Mackay, Esq., Hereford, for excellence in Scottish Gaelic—Neil Ross, Alan O. Anderson, Roderick Barron.

DON. MACKINNON, M.A., *Professor.*

LOGIC AND METAPHYSICS.

ADVANCED CLASS—METAPHYSICS.

FIRST-CLASS CERTIFICATES AND PRIZES.—1. J. M. Shaw, Inverness (*Bruce of Grangehill and Falkland Prize and Medal*); 2. George Wedderspoon, Fort-George.

SECOND-CLASS CERTIFICATE.—3. Peter Campbell, Oban.

ORDINARY CLASS—LOGIC AND PSYCHOLOGY.

FIRST-CLASS CERTIFICATES.—1. James Anderson, Forres; 2. Roderick Barron, Laggan, and E. B. Ross, Edinburgh—equal (*Medals*); 4. Jane Middleton, Edinburgh (*Elizabeth Hamilton Prize*); 5. R. G. Paterson, Edinburgh; 6. Annabella G. Clark, Edinburgh, and A. W. M'Clymont, Roxburghshire—equal; 8. Ernest Shearer, Orkney; D. G. Robertson, Trinity; and Alexander Duthie, Montrose—equal; 11. O. B. Milligan, Edinburgh; W. G. Orr, Hawick; Frank Ross, Coupar-Angus; and A. S. Ogilvie, Broughty-Ferry—equal; 15. J. J. Donaldson, Edinburgh; 16. A. B. Lorimer, Penpont; M. Millar Craig, Edinburgh; and D. Oswald Dykes, London—equal; 19. J. R. Hutton, Birkenhead, and Janet S. M'Ewen, Stonehaven—equal (*Prizes*); 21. Adam Mackay, Forfar, and George Walker, Inverness—equal; 23. J. M. Hendrie, Dumfries, and T. S. Lindsay, Cowdenbeath—equal; 25. D. E. Cameron, Stanley; 26. Nellie S. Shearer, Thurso; Margaret T. Spears, Edinburgh; and A. C. Murphy, Edinburgh—equal; 29. Jessie R. Smith, Craigellachie, and J. G. Sutherland, Wick—equal; 31. Alexander Robertson, Bo'ness; 32. J. R. Cuthbert, Ayr; 33. G. L. Brander, Edinburgh; J. B. Lorimer, Edinburgh; and Alexander Thomson, Rothesay—equal.

SECOND-CLASS CERTIFICATES.—30. Jessie R. Henderson, Edinburgh; 37. J. C. Ritchie, Leith; C. B. Milne, Edinburgh; P. B. Donaldson, Arbroath; A. A. Fraser, Edinburgh; Jessie Lees, Ayr; and R. L. Wilson, Lismore—equal; 43. F. J. Gordon, Edinburgh;

44. Margaret S. Cook, Thornhill; 45. M. F. Simpson, Edrom, and James Waterston, Edinburgh—equal; 47. William Pryde, Edinburgh, and James Williamson, Kirkcudbright—equal; 49. George Philip, Ross-shire, and Robert Nichol, Roxburghshire—equal; 51. J. G. Glen, Edinburgh, and W. H. Nelson, Rosewell—equal; 53. Norman Nicholson, Edinburgh; 54. Samuel Robertson, Edinburgh; 55. W. K. Tait, Caithness, and T. A. L. Cairns, Edinburgh—equal.

A. S. PRINGLE PATTISON, LL.D., *Professor.*

MORAL PHILOSOPHY.

HONOURS CLASS.

First-Class Certificates and Prizes.—1. John M. Shaw, Inverness, and Thomas M. Forsyth, Bonnington—equal (*Medals*); 3. Edith Hooper, Kent; 4. George Wedderspoon, Fort-George, Inverness-shire.

Second-Class Certificates.—5. Peter Campbell, Oban; 6 J. Chrystal Macmillan, B.Sc., Edinburgh.

ORDINARY CLASS.

First-Class Certificates.—1. Marion I. Gray, Edinburgh; 2. T. Fraser Scott, Cromarty (*Medals*); 3. J. Bryce Jamieson, Portobello; 4. T. C. Adam, Dunblane; 5. Alexander Mackie, Edinburgh, and Hugh Oswald, Kirkcaldy—equal; 7. D. O. Dykes, London; 8. D. G. M. Leith, Slateford (*Prizes*); 9. Helen S. Neill, Edinburgh; 10. Alys B. Biscombe, Egremont, Cumberland; 11. D. E. Cameron, Stanley, Perthshire; Oswald B. Milligan, Edinburgh, and James Murray, Galashiels—equal.

Second-Class Certificates.—14. Helen A. Lawson, Alloa, and Alda M. M. Matheson, Tarbat, Ross-shire—equal; 16. John Cooper, Edinburgh; Lizzie Y. Drummond, Thornhill, Dumfriesshire, and Helen J. D. Riach, Edinburgh—equal; 19. J. M. B. Duncan, Edinburgh; 20. Robert Donaldson, Musselburgh; 21. D. J. Young, Blairgowrie; 22. Winnifred K. Turcan, Edinburgh; 23. G. B. Bell, Dundee.

Special Study of Aristotle and Kant.—1. Marion I. Gray, Edinburgh (*Prize*); 2. Hugh Oswald, Kirkcaldy.

JAMES SETH, M.A., *Professor.*

COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

Prizes.—1. Hector James Anderson, Ardlui (*Medal and Merchant Company's Prize of £10, 10s.*); 2. James Stirling Ross, M.A., Edinburgh (*George Watson's Prize*); 3. George A. Carse, Edinburgh (*Daniel Stewart's Prize*); 4. Alexander Cunnison, Edinburgh; 5. Arthur Campbell Taylor, Edinburgh, and Marion I.

Gray, Edinburgh—equal; 7. Ernest E. Parker, Edinburgh; 8. John S. Wilson, Edinburgh; W. A. Mowat, M.A., Blackheath, London; and William Walker, Edinburgh—equal.

FIRST-CLASS CERTIFICATES.—11. James Crerar, Cumberland; 12. W. K. H. Macdonald, Brondesbury, London; 13. Robert Nichol, Roxburgh; 14. G. Turner Ford, Portobello, and James Lornie, Perthshire—equal; 16. James M. Gray, Cape Colony; 17. Frank W. Mackie, Edinburgh; 18. Alexander G. Anderson, Forres; 19. John C. Fenton, Portobello; 20. Alexander Waddell, Edinburgh; 21. William A. B. Gall, Elgin; 22. Hugh S. Winchester, Elgin; 23. Alexander W. Bain, Musselburgh, and James Y. Hunter, Hawick—equal; 25. Alexander M. Dundas, South Queensferry; 26. Victor Caldwell, M.A., Edinburgh; George Turner, Leith; and Samuel G. Corner, Inverness—equal.

ESSAYS.—1. R. J. Bryce, Edinburgh (*Prize*); 2. J. Y. Hunter (*Special Prize*).

HONOURABLE MENTION FOR ONE ESSAY.—J. S. Ross, M.A.; Marion I. Gray, and A. W. Bain.

J. SHIELD NICHOLSON, D.Sc., *Professor.*

THEORY, HISTORY, AND ART OF EDUCATION.

FIRST-CLASS CERTIFICATES.—1. James Melville, M.A.; Alexander Darroch, M.A.; and Alexander Mair, M.A.—equal (*Medallists*); 4. Mary Tweedie; 5. John Lees, M.A; 6. Annie L. Mackay; 7. Hugh B. Watson; 8. Johanne F. Thomsen; 9. Margaret S. Cook; 10. Robert Donaldson; 11. John C. Matheson; 12. Bessie K. Hogg; 13. Alexander Mackie, D. H. Ash, and Catherine B. Shaw—equal.

S. S. LAURIE, LL.D., *Professor.*

MATHEMATICS.

ADVANCED HONOURS CLASS.

FIRST-CLASS CERTIFICATES.—R. M. Shearer, Edinburgh (*Prize and Medal*); *R. D. Bell, Edinburgh; *D. Drysdale, Edinburgh; J. M. Dunnett, Kilmarnock; A. Milne, Edinburgh; S. F. Stewart, Largs.

SECOND-CLASS CERTIFICATES.—E. Blades, Armadale; *Miss M. Forrest, Cheltenham; *D. M. Johnstone, Edinburgh; G. A. Russell, Edinburgh.

INTERMEDIATE HONOURS CLASS.

FIRST-CLASS CERTIFICATES.—J. K. H. Inglis, New Zealand (*Prize and Medal*); W. D. R. Prentice, Joppa; A. R. Normand, Edinburgh.

SECOND-CLASS CERTIFICATES.—W. Gentle, Edinburgh; *J. M. Newton, Dundee.

* Attending the class for the second time, and not eligible for prizes.

SENIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. W. J. Kelly, Menstrie; A. J. Ritch, Orkney; and E. B. Ross, Edinburgh—equal (*Medals*); 4. A. Gray, Lochee; 5. W. N. Prophet, Forfar; 6. J. A. A. Morrison, Kirkmichael, Perthshire; 7. P. M'Ewan, Perth; 8. W. H. Nelson, Rosewell; 9. A. J. Ross, Edinburgh; 10. G. W. Jones, Dundee; 11. R. C. Wallace, Orkney; 12. G. A. Carse, Edinburgh, and Miss W. G. Jamieson, Edinburgh—equal; 14. W. Pryde, Edinburgh; 15. J. A. Cameron, Stanley.

SECOND-CLASS CERTIFICATES.—R. Aitken, Hawick; C. F. Allan, Edinburgh; A. H. Armstrong, Belfast; D. A. Bishop, Leith; Miss M. W. Cameron, Arbroath; J. R. Davidson, Camelon; W. R. Durham, Thurso; W. Gemmill, Kilmarnock; Miss H. M'Lachlan, Edinburgh; D. Mathieson, Edinburgh; A. Robertson, Bo'ness; C. Robertson, Stanley; Miss M. T. Ross, Montrose; J. Waterston, Paisley; P. White, Tayport; J. Williamson, Kirkcudbright.

The Newton Bursary in Mathematics has been awarded to W. J. Kelly, Menstrie.

JUNIOR CLASS.

PRIZES AND FIRST-CLASS CERTIFICATES.—1. J. S. Wilson, Edinburgh (*Medal*); 2. G. S. Duncan, Leith; 3. J. H. Balleny, Edinburgh; 4. Miss J. J. M. Sibbald, Lockerbie; 5. J. L. Pirie, Edinburgh; 6. J. Paterson, Ayr; 7. A. H. Gardner, Edinburgh; 8. Miss M. J. Thompson, Alloa; 9. J. Graham, Lochmaben.

SECOND-CLASS CERTIFICATES.—Miss G. N. Aitken, Singapore; J. E. Geddes, Edinburgh; J. Grieve, Edinburgh; F. Hamilton, Bo'ness; Miss M. Jolly, Edinburgh; A. S. Lawson, Dundee; J. Liddle, Edinburgh; A. Mackie, Caithness; Miss J. E. Moir, St Cyrus; W. Y. Rennie, Dundee; J. M. Ritchie, Edinburgh; T. Steven, Edinburgh; J. B. Stewart, Edinburgh.

The Kelland Prize, open to members of the Junior Class of the previous winter session, was awarded to A. J. Ross, Edinburgh.

G. CHRYSTAL, LL.D., *Professor.*

NATURAL PHILOSOPHY.

ADVANCED CLASS.

FIRST-CLASS HONOURS.—1. D. Drysdale, Edinburgh, and R. D. Bell, Scotland (*Medals and Special Prize*); 3. A. Milne, Edinburgh; 4. J. M. Dunnett, England; G. A. Russell, Scotland; and S. F. Stewart, Largs—equal.

SECOND-CLASS HONOURS.—7. E. Blades, Armadale; 8. D. M. Johnstone, Scotland; 9. A. Waddell, Kelso.

ORDINARY CLASS—HIGHER DIVISION.

PRIZES AND FIRST-CLASS HONOURS.—1. E. B. Ross, Scotland (*Medal*); 2. E. Shearer, Scotland; 3. James Murray, Dundee.

SECOND-CLASS HONOURS.—4. W. H. Nelson, Scotland; 5. J. A. A. Morrison, Scotland; 6. W. R. Halliday, Edinburgh; 7. G. Wilkie, Scotland.

LOWER DIVISION.

PRIZES AND FIRST-CLASS HONOURS.—1. R. C. Wallace, Orkney; 2. James Reid, Leven; 3. G. Philip, Ross-shire (*Medals*); 4. J. R. Cuthbert, Ayr; 5. W. N. Prophet, Forfar; 6. A. Gray, Lochee; 7. James Anderson, Forres; 8. P. White, Scotland; 9. G. Clark, Scotland, and G. W. Jones, Dundee—equal; 11. P. M'Ewan, Scotland, and D. J. Young, Blairgowrie—equal; 13. A. H. Armstrong, Belfast.

SECOND-CLASS HONOURS.—14. C. Robertson, Scotland; 15. G. D. Matthewson, Dunfermline; 16. J. C. Ewing, Scotland; T. S. Lindsay, Scotland; and W. G. Robertson, Roxburghshire—equal; 19. K. Maclennan, Scotland; 20. D. Clouston, Orkney, and W. Young, Crieff—equal; 22. E. T. Steele, Kendal, and A. Wood, Dundee—equal; 24. R. G. Russell, Scotland; 25. Miss M. D. Black, Scotland, and R. W. Johnstone, Scotland—equal; 27. G. Mill, Scotland; 28. J. H. Duncan, Fifeshire; 29. B. W. M'Lean, Linlithgow, and John Walker, Scotland—equal; 31. R. Moyes, Scotland; 32. J. B. Stewart, Scotland.

PRIZE FOR ORDINARY EXAMINATIONS.—R. C. Wallace.

PHYSICAL LABORATORY.

THE FOLLOWING ARE HIGHLY COMMENDED.—W. Gentle, J. R. Milne, A. Gray, J. C. Leighton, A. R. Normand, G. Philip, W. N. Prophet, and W. Scott.

The Neil-Arnott Scholarship is awarded to W. Gentle, the Fraser Bursary to J. R. Milne, and the Newton Bursary to George Philip.

P. G. TAIT, M.A., *Professor.*

INTERMEDIATE HONOURS.

FIRST-CLASS HONOURS.—1. J. K. H. Inglis, New Zealand (*Medal*); 2. Alice B. Lennie, Edinburgh.

SECOND-CLASS HONOURS.—3. S. Swaminadhan, India; 4. D. G. Mitchell, Edinburgh; and A. R. Normand, Scotland—equal; 6. J. C. Cameron, Edinburgh.

S. M. Dunnett, Kilmarnock, and R. M. Shearer, Scotland, attending the class for the second time, received first-class certificates.

C. G. KNOTT, D.Sc., *Lecturer.*

BRITISH CONSTITUTIONAL HISTORY.

HONOURS CLASS.

1. John Tait (*1st Prize*); Alex. Cormack (*2nd Prize*).

J. KIRKPATRICK, M.A., LL.D., *Professor.*

HISTORY.

HONOURS CLASS.

"England, Scotland, France, and Burgundy, A.D. 1415-1485."

FIRST-CLASS CERTIFICATES AND PRIZES.—1. Thos. Paterson, Edinburgh (*Medal*); 2. Alex. Cormack, Edinburgh.

SECOND-CLASS CERTIFICATE.—3. Malcolm Campbell, Keills, Argyll.

ORDINARY CLASS.

"General British History."

FIRST-CLASS CERTIFICATES AND PRIZES.—1. Thos. Fraser Scott, Newton, Cromarty (*Medal*); 2. Alex. Flint, Lasswade; 3. John Inch Low, Blairgowrie; 4. George Clark, Falkirk; 5. Alys Beatrix Biscombe, Egremont; 6. Lilias A. G. Fraser, Edinburgh, and Chas. F. Grant, Dundee—equal; 8. Archibald N. Skelton, Edinburgh; 9. Ethel Whalley, Darwen, Lancs.

SECOND-CLASS CERTIFICATES.—10. Adam Mackay, Forfar; 11. Samuel Robertson, Edinburgh; 12. Elizabeth A. Duncan, Edinburgh; 13. Muriel R. M'Kie, Edinburgh; and G. S. C. Stevenson, Portobello—equal; 15. Wm. Geddie, Edinburgh; and Wm. Jardine, Haddington—equal; 17. Thos. J. C. Gifford, Edinburgh; and Rob. G. John, Manchester—equal; 19. Jas. S. Kinghorn, Edinburgh; and Jas. S. Miller, Berwick—equal; 21. Wm. A. Fleming, Edinburgh; and John M'Rae, Clechan, Kintyre—equal; 23. John D. M'Leod Black, Lairg, Sutherlandshire; and Jane M. Sim, Peterhead—equal; 25. James H. Macdonald, Edinburgh; and Chas. W. Rixon, Tisbury, Wilts—equal; 27. Alda M. M. Matheson, Tarbat, Ross-shire; Rob. Moyes, Kingskettle, Fife; Malcolm A. Murray, Edinburgh; Wm. G. Orr, Edinburgh; and Jas. Young, Edinburgh—equal.

G. W. PROTHERO, D.Litt., *Professor.*

FINE ART.

MEDAL AND FIRST PRIZE.—Walter Gibson Smith.

SECOND PRIZE.—Joseph Thomson.

COUSIN PRIZE FOR ESSAYS.—Edward M'Gegan. *Proxime accessunt*—T. Craigie Marwick and Joseph Thomson.

CLASSICAL ARCHÆOLOGY (HONOURS CLASS).

PRIZE—John Lees, M.A.

G. BALDWIN BROWN, M.A., *Professor.*

Faculty of Science.

SUMMER SESSION, 1898.

STRUCTURAL AND FIELD GEOLOGY.

MEDAL.—George Butler, England.

HONOURS CERTIFICATES.—1. George Butler, England; 2. Henry Wilkie, Scotland; 3. Ernest Shearer, Scotland; 4. Henry H. Simpson, Virginia, U.S.A.; 5. J. Somerville Geikie, Edinburgh; and C. Monro Hector, New Zealand—equal; 7. Malcolm Alex. Murray, Calcutta; 8. L. R. Weir, Lamlash; 9. Cyril R. Sprague, Edinburgh; 10. Victor G. Alexander, Scotland; 11. Colin Story, Edinburgh; 12. J. A. Shoolbread, Portsmouth.

JAMES GEIKIE, D.C.L., LL.D., *Professor.*

PETROLOGY.

1. Andrew Young, Perth (*Medallist*); 2. Cecil B. Crampton, England, and Mowbray Ritchie, Edinburgh—equal; 4. Sidney F. Ashby, Birkdale, Southport; 5. Donald Banks, Wigtownshire; 6. David P. Grubb, Dundee; 7. Samuel Gray, Edinburgh; 8. John W. Eastham, Lancashire.

JOHN S. FLETT, M.B., B.Sc., *Lecturer.*

ORGANIC CHEMISTRY.

FIRST-CLASS HONOURS.—1. Charles E. Fawsitt (*Medallist*); 2. Andrew Hunter.

SECOND-CLASS HONOURS.—3. Archibald Boon; 4. James Lornie; 5. C. Anderson; 6. D. Menzies; 7. D. Banks; 8. M. Ritchie; 9. D. F. Chalmers.

ALEX. CRUM BROWN, M.D., *Professor.*

ADVANCED ASTRONOMY.

1. Alan W. C. Menzies, M.A.; 2. Robert Horn.

RALPH COPELAND, Ph.D., *Professor.*

WINTER SESSION, 1898-99.

ASTRONOMY.

1. George Clark (*Medal and 1st Prize*); 2. S. Swaminadhan (*2nd Prize*); 3. Thomas William Stewart; 4. Andrew Young.

RALPH COPELAND, Ph.D., *Professor.*

GEOLOGY AND MINERALOGY.

HONOURS CERTIFICATES.—1. Charles Anderson, Scotland (*Medallist*); 2. Donald Grant, Carr Bridge; 3. Walter Ernest Wait, Coonoor, S. India; 4. Harry D. Fraser, Scotland; 5. William Gentle, Dundee; 6. James C. Ritchie, Leith; 7. James J. Donaldson, Scot-

land; 8. George Elder, Scotland; 9. D. Heggie, Ireland; and Grace H. Jacob—equal; 10. J. C. Ewing, Scotland; 11. James Geddes, Scotland; A. S. Millard, Notts; and Henry Wilkie, Scotland; obtained respectively 64 and 60 per cent. of the available marks in two examinations.

PRACTICAL GEOLOGY AND MINERALOGY.

HONOURS CERTIFICATES.—1. Tom W. Stewart, Crawfordjohn (*Medallist*); 2. Donald Banks, Wigtownshire; 3. P. R. Chalmers, Scotland; 4. Walter Ernest Wait, S. India; 5. Grace H. Jacob, England.

GRADUATION HALF COURSE (ARTS).

HONOURS CERTIFICATES. 1. George Butler, England; 2. J. S. Allison, Scotland; 3. George G. Johnstone, Malta.

JAMES GEIKIE, D.C.L., LL.D., *Professor.*

SYSTEMATIC ENGINEERING.

1. J. M. Newton (*Medal and Prize*); 2. D. P. Grubb (*Prize*); 3. D. W. Durie (*Prize*); 4. W. Gordon; 5. C. R. Sprague; 6. G. S. Yates; 7. T. P. W. Barty.

G. F. ARMSTRONG, M.Inst., C.E., *Professor.*

GEOMETRICAL AND MECHANICAL DRAWING.

1. D. P. Grubb (*Medal*); 2. J. M. Newton (*Prize*); 3. C. R. Sprague; 4. D. W. Durie; 5. W. Gordon; 6. R. G. Russel; 7. T. P. W. Barty.

W. HUME KERR, M.A., B.Sc., *Lecturer.*

DYNAMICS (ENGINEERING).

SECOND-CLASS HONOURS.—C. R. Sprague, Edinburgh.

C. G. KNOTT, D.Sc., *Lecturer.*

AGRICULTURAL AND RURAL ECONOMY.

1. Fraser Story, Innerleithen; 2. H. C. Sampson, Darlington (*Medallists*); 3 D. S. Rabagliati, Bradford; 4. W. J. Megaw, Ballymoney; 5. Tom Welsh, Moffat; 6. Colin Story, Edinburgh; 7. W. A. MacGillivray, Edinburgh; 8. E. J. Mackenzie, Caithness, and Archibald Robertson, Peebles—equal; 10. G. M. Fraser, Edinburgh, and J. M. Rankin, Edinburgh—equal; 12. J. H. Fraser, Inverness; 13. L. L. Bilton, Edinburgh, and W. F. Mackenzie, Ross-shire—equal; 15. L. A. Ewart, Moffat.

STEVEN SCHOLARSHIP OF ABOUT £75.—W. J. Megaw and H. C. Sampson—equal.

HIGHLAND AND AGRICULTTRAL SOCIETY PRIZES.—(Books, value £10)—E. J. Mackenzie, D. S. Rabagliati, J. M. Rankin, and Colin Story—equal.

ROBERT WALLACE, *Professor.*

AGRICULTURAL CHEMISTRY.

FIRST-CLASS CERTIFICATES.—1. H. C. Sampson, Durham (*Medallist*); 2. Wm. J. Megaw, Ballymoney; 3. John M. Rankin, East Lothian; 4. Edward J. Mackenzie, John-o'-Groats.

SECOND-CLASS CERTIFICATES.—5. Arch. Robertson, Peeblesshire; 6. John H. Fraser, Inverness.

A. P. AITKEN, D.Sc., *Lecturer.*

AGRICULTURAL ENTOMOLOGY.

1. Fraser Story (*Medallist*); 2. H. C. Sampson; 3. Colin Story; 4. J. M. Rankin; 5. W. J. Megaw; 6. E. J. Mackenzie.

W. FREAM, LL.D., B.Sc., *Lecturer.*

FORESTRY.

1. Fraser Story, Innerleithen (*last year's Medallist*); 2. Eric A. Nobbs, Edinburgh (*Medal*); 3. Hugh C. Sampson, Darlington (*Prize*); 4. Robert D. Hudson, India; 5. George M. Fraser, Edinburgh; 6. James Stenhouse, Dunbar.

FRED. BAILEY, *Lecturer*

Faculty of Divinity.

WINTER SESSION, 1898-99.

DIVINITY.

THIRD YEAR.

PRIZEMEN.—1. George D. Shepherd, M.A.; 2. James Mathers, B.A.; 3. John Chalmers, M.A.; 4. C. Gordon Mackenzie, M.A.; 5. Gavin Millar, M.A.; 6. Henry S. Coffin, B.A.

SECOND YEAR.

PRIZEMEN.—1. Richard Bell, M.A.; 2, John Dickie, M.A., and Bruce M'Ewen, M.A.—equal; 3. A. J. Campbell, M.A.

FIRST YEAR.

PRIZEMEN.—1. William A. Curtis, M.A.; 2. Archibald Scott Ballantyne, M.A.; 3. James Kirk, M.A.; 4. Henry C. Duncan, M.A., and Daniel A. Morrison, M.A.—equal.

HONOURABLE MENTION.—Alexander B. Robb, M.A.

R. FLINT, D.D., *Professor.*

BIBLICAL CRITICISM AND BIBLICAL ANTIQUITIES.

WRITTEN EXAMINATIONS.—1. James Mathers, B.A., Ulster (*Medallist*); 2. Richard Bell, M.A., Dumfriesshire, and John C. Mack,

M.A., Edinburgh -equal; 4. George M'Dougall, M.A., Dumfriesshire; 5. William A. Curtis, M.A., Edinburgh, and Donald Lamont, M.A., Argyleshire -equal; 7. George D. Shepherd, M.A., Ecclesmachan.

HONOURABLE MENTION.—Gavin Millar, M.A.; W. M. Low, M.A.; Lewis M'Glashan, M.A.

ORAL EXAMINATIONS.—J. R. Hugo, B.A., Cape Colony; John C. Mack, M.A.; Donald Lamont, M.A.

JOHN PATRICK, D.D., *Professor.*

ECCLESIASTICAL HISTORY.

PRIZEMEN.—1. George Douglas Shepherd, M.A., Ecclesmachan, Uphall (*Medallist*); 2. Archibald Scott Ballantyne, M.A., Galashiels; 3. George M'Dougall, M.A., Dumfriesshire; 4. Gavin Millar, M.A., Lanarkshire; 5. William Marshall Low, M.A., Leith; 6. Alexander B. Robb, Linlithgowshire; 7. Charles Gordon Mackenzie, M.A., Aboyne.

HONOURABLE MENTION.—James Mathers, B.A., Londonderry; James Kirk, M.A., Fifeshire.

M. C. TAYLOR, D.D., *Professor.*

HEBREW AND SEMITIC LANGUAGES.

SENIOR HEBREW.

PRIZEMEN.—1. John Dickie, M.A., Aberdeenshire (*Medallist*); 2. Lewis M'Glashan, M.A., London; 3. James Black, M.A., Elgin; 4. H. S. Coffin, B.A., New York.

SECOND-CLASS CERTIFICATES OF MERIT.—5. Robert King, B.A., Manitoba; 6. William A. Curtis, M.A., Edinburgh; 7. *W. G. M'Kean, Edinburgh; S. A. J. Campbell, B.A., Aberdeenshire.

JUNIOR HEBREW.

PRIZEMEN.—1. James Kirk, M.A., Fifeshire (*Medallist*); 2. William Murdie, M.A., Sutherlandshire.

SECOND-CLASS CERTIFICATES OF MERIT.—3. *James Reid, M.A., Edinburgh; 4. J. A. Aitchison, Falkirk; 5. Daniel Morrison.

SENIOR ARABIC.

PRIZEMEN.—Richard Bell, M.A., Dumfriesshire.

SECOND-CLASS CERTIFICATES OF MERIT.—Surjat Singh, Punjab, India.

JUNIOR SYRIAC.

No Competitive Examination held.

ARCHIBALD R. S. KENNEDY, D.D., *Professor.*

* Second Attendances.

Faculty of Law.

SUMMER SESSION, 1898.

CIVIL LAW.

1. W. T. Watson; 2. J. Hossell Henderson, M.A., Edinburgh, and J. S. Mackay—equal (*Prizemen*); 4. W. M'Clymont, M.A., Edinburgh; 5. J. M. Vallance; 6. R. J. Philip and J. C. Watt —equal; 8. W. A. Fleming.

The Muirhead Prize, awarded on the results of the Winter and Summer Sessions together, was divided between J. Hossell Henderson and W. T. Watson.

JAMES MACKINTOSH, B.A., *Professor.*

SCOTS LAW.

1. Edward J. Baxter, Forfarshire; 2. John Smart, jun., Edinburgh; 3. J. N. Davidson, Forfarshire; 4. Thomas J. M'Lean Laing, Forfarshire (*Prizemen*); 5. David Taylor, Perthshire; 6. James Scrimgeour, Fifeshire; 7. Alexander M. Cook, Fifeshire; 8. J. Paris Steele, Stirlingshire; 9. George Worrall, Forfarshire; 10. Robert Linton, Selkirkshire; 11. James Cumming, Forfarshire, and Thomas M'Lean, Perthshire—equal; 13. William Mowatt Cowie, Kincardineshire; 14. David Reid Ross, Wigtownshire; 15. Innes West, Banffshire; 16. D. M. Stirton, Forfarshire; 17. G. Gray Pattison, Edinburgh, and John C. Wilson, Midlothian —equal; 19. Peter Sinclair, Caithness-shire; 20. Thomas M. Hunter, Wigtownshire; 21. E. S. Greig, Fifeshire; 22. W. S. M'Blain, Edinburgh; 23. James Walker Fraser, Edinburgh; 24. Thomas Haining Gillespie, Dumfriesshire.

Essay Prizes.—1. D. Robertson; 2. James Scrimgeour; 3. John Smart, jun.

JOHN RANKINE, Q.C., M.A., LL.D., *Professor.*

FORENSIC MEDICINE.

1. John Pattison, M.A. (*Medallist*); 2. T. C. Lowe; 3. J. Campbell Irons and Alfred P. M. Thoms—equal; 5. D. Duncan Paton; 6. T. A. Menzies; 7. J. R. Hunter and John Swan Mercer—equal.

HENRY D. LITTLEJOHN, Kt., M.D.

INTERNATIONAL PRIVATE LAW.

1. John S. Mackay, Grangemouth (*Class Prize*); 2. George Worrall, Dundee; 3. James Mitchell, Perth; 4. Alfred P. M. Thoms, Dundee.

GEO. WARDLAW BURNET, M.A., B.L., *Lecturer.*

WINTER SESSION, 1898-99.

PUBLIC LAW.

PRIZEMEN.—1. J. S. Mackay; 2. W. Colville, A. Cormack, and T. A. Menzies—equal; 5. J. Watson; 6. D. M. Burden; 7. R. J. Philip and J. S. Mercer—equal; 9. W. H. Sellar, J. Mitchell and R. F. Irving—equal; 12. J. Scott and J. Campbell Smith—equal; 14. R. Hendry.

ESSAY PRIZE—J. Scott.

L. J. GRANT, Bart., B.A., *Professor.*

CIVIL LAW.

1. John Pattison M.A., Edin., and F. C. Thomson, B.A., Oxon.—equal; 3. D. M. Burden, M.A., Edin., and M. C. Heine, B.A., M'Gill Coll.—equal (*Prizemen*); 5. A. P. Nimmo, M.A., St Andrs.; 6. T. A. Menzies, M.A., Edin.; 7. John Watson; 8. J. C. Fenton and J. Scringeour—equal; 10. George Worrall and J. Paris Steele—equal; 12. J. B. Lorimer; 13. J. C. Guthrie.

JAMES MACKINTOSH, B.A., *Professor.*

CONSTITUTIONAL LAW AND HISTORY.

PRIZE AND HONOURS LIST.—1. Mary G. Williamson (*1st Prize*); 2. D. Connel, M.A.; John S. Mercer, and J. Crabb Watt—equal (*2nd Prize*); 5. D. M. Burden, M.A.; 6. J. Smith Clark; 7. John Pattison; 8. W. S. Colville, J. Harold Macdonald, and Alex. Neil, M.A.—equal.

HONOURABLE MENTION.—J. Guthrie, F. R. Sanderson, B.A., F. C. Thomson, B.A., and D. Hay Thornburn.

J. KIRKPATRICK, M.A., LL.D., *Professor.*

SCOTS LAW.

1. Walter T. Watson, Midlothian (*Thorburn scholar*); 2. John M. Vallance, Midlothian; 3. W. M. Henderson, Dumfriesshire; 4. J. H. Henderson, Lanarkshire; 5. George Nicolson, Lanarkshire; 6. Andrew F. Steele, Fife; 7. John S. Mackay, Stirlingshire; 8. G. K. Allan, Midlothian; 9. George S. Macknight, West Lothian (*Prizemen*); 10. Robert B. Black, Brazil, and John T. Watson, Fife—equal; 12. C. W. Cumming, Kirkcudbrightshire; 13. R. Stewart Brown, Midlothian; 14. W. R. Ramsay, Midlothian; 15. Charles Skinner, Aberdeenshire; 16. W. M. Hay, Banffshire; 17. William M'Clymont, Roxburghshire, and John D. Murdoch, Lanarkshire—equal; 19. George Rennie, Midlothian; 20. C. P. Symington, Midlothian; 21. Andrew Bennet, Fife; 22. J. W. Pitcairn, Edinburgh.

JOHN RANKINE, Q.C., M.A., LL.D., *Professor.*

CONVEYANCING.

1. Edward John Baxter, Forfar; 2. D. Robertson, Wigtownshire; 3. Thomas S. Welsh, Edinburgh; 4. J. N. Davidson, Forfar; 5. James Cumming, Forfar; 6. William S. M'Blain, Edinburgh; 7. Alexander M. Cook, Fife; 8. John M. Davidson, Dumfries, and Thomas J. M'L. Laing, Forfar—equal (*Prizemen*); 10. James R. Dickson, Lanark; 11. William A. Jolly, Edinburgh; 12. David R. Ross, Wigtown; 13. George A. Burns, Haddington; 14. Thomas H. Gillespie, Dumfries; 15. Thomas M. Hunter, Wigton; 16. Robert S. Robertson, Orkney; 17. James Scrimgeour, Fife; 18. Robert Linton, Selkirk; 19. C. L. Addison Smith, Edinburgh; 20. James Coupar, Kincardine; 21. George Worrall, Forfar, and W. G. W. Clark, Kircudbright—equal; 23. Edward G. Greig, Fife, and John Ross, Edinburgh—equal; 25. J. D. Alexander, Ayr; 26. Thomas M'Lean, Perth, and Edgar L. Brown, Edinburgh—equal; 28. James Hynd, Stirling, and David M. Stirton, Forfar—equal; 30. W. D. Kirkwood, Essex; 31. Andrew A. Jackson, Dumfries; 32. George A. Grant, Edinburgh; 33. George Hart, Ayr; 34. Peter Sinclair, Caithness; 35. W. H. Hamilton, Edinburgh, and William M. Cowie, Kincardine—equal; 37. John C. Wilson, Edinburgh; 38. J. W. Wyllie, Lanark; 39. David Taylor, Perth, and Henry I. Lindsay, Edinburgh—equal; 41. Charles N. Cowper, Edinburgh, and G. Gray Pattison, Edinburgh—equal.

J. P. WOOD, W.S., *Professor.*

PROCEDURE AND EVIDENCE.

First Prize.—J. Hossell Henderson, M.A., Edinburgh.

J. J. COOK, LL.B., *Lecturer.*

Faculty of Medicine.

SUMMER SESSION, 1898.

ELEMENTARY BOTANY.

First-Class Honours.—1. R. E. Russell, Cape Colony; 2. Thomas B. Hamilton, Melrose; 3. J. W. Scott Macfie, England; 4. Charles M. Campbell, Edinburgh (*Medallists*); 5. William Lilico, Ireland; 6. R. W. Johnstone, Edinburgh; 7. George Henderson, Scotland, and Robert C. Low, Edinburgh—equal.

Second-Class Honours.—9. C. R. F. Hartley, Sowerby, Thirsk, and George M'Farland, New Zealand—equal; 11. Henry H. Robarts, London; 12. William W. Smith, Scotland; 13. Harold Kerr, London; 14. Henry M'Cormac, Ireland, and Matthew Holmes, New Zealand—equal; 16. James P. Kennedy, New Zealand; 17. John Maclean, Scotland; 18. Samuel Charles

Ellison, Ireland, and James S. Sewell, England—equal; 20. Alexander Miller, Edinburgh; 21. Henry Speirs, Scotland; Edward A. Braine, Montrose; and Hugh S. Davidson, Melrose—equal; 24. E. Bennett, Ireland; 25. J. Fairbairn, British Guiana; C. Hawkins Craig, Edinburgh; and John Dunlop, Lanark—equal; 28. Alfred Nolan Fell, New Zealand; W. Dundas Wright, London; Thomas H. Osler, Cape Colony; David J. Scott, Montrose; Charles E. Marshall, New Zealand; and H. Lovett Cumming, Glasgow—equal; 34. James S. Elliot, New Zealand; D. J. Hamman, Cape Colony; George J. A. Tait, New Zealand; James Girdwood, Ayr; and W. F. Smeall, Jedburgh—equal; 39. A. Campbell Geddes, London; 40. Arthur H. M'Shine, Trinidad, and R. G. Gordon, Chili—equal; 42. Alexander Bruce, Edinburgh; George J. Wentzel, South Africa; and S. A. Kinnier Wilson, New Jersey, U.S.A.—equal; 45. Henry Herd, Leith, and Percy Elkarey, Palestine—equal; 47. James H. Connolly, Ireland; 48. C. O'Flaherty, Liverpool, and Ernest G. Girdwood, South Africa—equal; 50. William Bennett, Ireland, and W. Armour Brown, Scotland—equal.

ELEMENTARY PRACTICAL BOTANY.

Class A.

First-Class Honours.—1. T. W. Scott Macfie, England, and R. E. Russell, Cape Colony—equal *Medallists*; 3. S. A. Kinnier Wilson, New Jersey, U.S.A.; 4. James Kirkness, Scotland; 5. A. Campbell Geddes, London, and Henry J. Dunbar, Dunfermline—equal; 7. Roland T. Graves Aickin, New Zealand; M. Davies, Wales; Francis H. Dickson, Edinburgh; and Thomas H. Osler, Cape Colony—equal; 11. Thomas B. Hamilton, Melrose; 12. J. W. Cathles, Scotland, and F. W. Lundy, Cape Colony—equal.

Second-Class Honours.—14. Henry H. Robarts, London; 15. R. D. Kidd, Natal, and George M'Farland, New Zealand—equal; 17. E. Inglis Hall, Lancaster; 18. Charles Macfie Campbell, Edinburgh; C. R. F. Hartley, Sowerby, Thirsk; and A. E. Nalborough, Germany—equal; 21. Henry MacCormac, Ireland, and Walter R. Reid, England—equal; 23. M. Ashkenazie, Roumania; J. Fairbairn, British Guiana; and D. J. Hamman, Cape Colony—equal.

Class B.

First-Class Honours.—1. J. Howard Montgomery, Ireland; 2. Alexander Miller, Edinburgh (*Medallists*); 3. A. W. Montgomery Harvey, Nova Scotia, and T. P. Caverhill, Berwick-on-Tweed—equal; 5. W. Armour Brown, Scotland; 6. James Girdwood, Ayr; Alfred M. Gloag, Edinburgh; and John Dunlop, Lanark—equal; 9. Robert C. Low, Edinburgh; William Hume,

Australia; and William Bennett, Ireland—equal; 12. Cecil M. Houghton, Ireland; 13. James S. Sewell, England, and James M. Johnstone, Scotland—equal.

SECOND-CLASS HONOURS.—15. Ernest G. Girdwood, South Africa; 16. Alexander Bruce, Edinburgh; 17. Austin Mack Caverhill, Scotland; 18. R. G. Gordon, Chili, and Ernest Muir, Scotland—equal; 20. W. Dundas Wright, London, and Ewen J. Taylor, Cupar-Fife—equal; 22. James H. Connolly, Ireland; E. L. Meynell, India; Hugh S. Davidson, Melrose, and James Scobie, Scotland—equal.

FOR DRAWINGS ILLUSTRATING WORK DONE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. Robert C. Low, Edinburgh, and J. W. Scott Macfie, England — equal; 3. Harry Lovett Cumming, Glasgow; 4. S. A. Kinnier Wilson, New Jersey, U.S.A. (*Prizes*).

SECOND-CLASS HONOURS.—5. A. E. Nalborough, Germany; 6. H. S. Gaskell, Peterborough; 7. Henry M. Stumbles, England; 8. Hubert Astley Knight, Dublin; 9. W. Armour Brown, Scotland; 10. Thomas B. Hamilton, Melrose; 11. Reginald H. Carlisle, Liverpool.

FOR MICROSCOPIC PREPARATIONS MADE DURING THE SESSION.

FIRST-CLASS HONOURS.—1. M. Davies, Wales; 2. Henry H. Robarts, London (*Prizes*).

SECOND-CLASS HONOURS.—3. R. G. Gordon, Chili, and C. A. Lawrence, England—equal.

ISAAC BAYLEY BALFOUR, M.D., D.Sc., *Professor.*

ELEMENTARY ZOOLOGY.

FIRST-CLASS HONOURS.—1. John Dunlop (*Medallist*); 2. E. A. Braine and R. C. Low—equal; 4. J. M. Macrae.

SECOND-CLASS HONOURS.—5. J. W. S. Macfie; 6. A. C. Geddes and W. Lilico—equal; 8. W. Bennett.

PRACTICAL ZOOLOGY.

FIRST-CLASS HONOURS.—1. John Dunlop (*Medallist*).

SECOND-CLASS HONOURS.—2. James S. Sewell; 3. J. W. Cathles; 4. A. W. K. Straton; 5. S. E. Ellison; 6. James Kirkness.

J. C. EWART, M.D., *Professor.*

PRACTICAL CHEMISTRY.

FIRST-CLASS HONOURS.—1. A. R. Normand, Edinburgh (*Medallist*); 2. Clerk Ranken, Edinburgh; 3. John Wishart, Scotland; 4. J. H. Jones, N. Wales, and C. L. Stewart, Calcutta—equal; 6. R. H. S. Langeveld, South Africa.

SECOND-CLASS HONOURS.—7. E. G. Fraenkl, Dundee; 8. C. E. F. Gaitskell, England; 9. J. H. Connolly, Belfast.

ALEX. CRUM BROWN, M.D., *Professor.*

PHYSICS.

First-Class Certificates.—1. T. Hamilton (*Medallists*); 2. H. H. Robarts; 3. T. Dommisse; 4. C. O'Flaherty; 5. L. Anderson, L. Fourie, and H. MacCormac—equal; 8. G. T. Wentzel; 9. C. R. F. Hartley; 10. E. G. Girdwood and R. W. Johnstone—equal; 12. F. H. Gibson and D. J. Hamman—equal; 14. W. J. Basson and T. S. Dick-Cleland—equal.

Second-Class Certificates.—16. A. M. Caverhill; 17. A. W. Gloag; 18. A. B. Cox, J. M. Johnstone, and F. H. Osler—equal; 21. A. E. Nalborough and F. A. Wille—equal; 23. J. Bentley; 24. W. Blackwood; 25. E. J. Taylor; 26. D. J. Scott; 27. B. Blacklock and G. J. Moriarty—equal; 29. B. A. K. Cullen; 30. J. George, S. A. K. Wilson and C. H. Wright—equal.

P. G. TAIT, M.A., *Professor.*

SENIOR PRACTICAL ANATOMY.

First-Class Honours.—1. Peter Murray, Morayshire, and J. G. M'Dougall, Montrose (*Medallists*)—equal; 3. J. F. Allan, Scotland; 4. John Ross, M.A., Edinburgh; 5. R. V. Clark, Edinburgh; 6. G. B. Butt, India; 7. A. G. Lennie, Edinburgh, and M. C. Morgan, Wales—equal; 9. Launcelot Bruce, Brechin; H. M. Roberts, North Wales; A. D. Spence, Montrose; and Philip Weatherbe, Nova Scotia—equal; 13. Robert Affleck, Galloway; B. G. Forman, Edinburgh; and Peterswald Pattison—equal; 16. R. J. M'Clelland, Ireland; 17. A. T. Gavin, Ayrshire, and John Jamieson, Edinburgh—equal; 19. G. S. Carey, Calcutta; H. J. George, Jamaica; Florizel Myers; and J. O. Williams, Wales—equal; 23. H. L. Clift, India; R. S. Ellis, India; and J. H. C. Orr—equal; 26. Stephen Garvin, Ireland; 27. George Steven, Edinburgh; 28. T. A. Mackenzie, Edinburgh.

Second-Class Honours.—29. C. H. Lindsay, Ireland; 30. J. A. L. Wallace, Turriff.

First and Second Years.

(Examinations conducted on the Students' Own Dissections.)

First-Class Honours.—1. E. P. Calder, Berwickshire; G. S. Murray, Bo'ness; G. C. I. Robertson, M.A., Clackmannan, and R. J. Terry, St Louis, U.S.A. (*Medallists*)—equal; 5. G. C. Burgess; Adam Clark, Wigtownshire; R. A. J. Harper, Midlothian; A. E. Hunter, Eskbank; James Halliday, Dumfries; A. C. Keay, Dunkeld; J. H. Meikle, Inverary; David MacGregor, Dunfermline; and C. J. Shaw, Perthshire—equal; 14. J. R. Edward, Musselburgh; William Landsborough, Kilmarnock; P. F. M'Farlan, Dumfries; L. Tait M'Clintock, Shropshire; M. W. Robertson, Edinburgh; and B. P. Watson, Fife—equal; 20. R. T. Bailie, Brechin; S. A. Ellerbek, Denmark; Wilbert Good-

child, Westmoreland; Sidney Gilford, Surrey; R. M. Grant, Inverness; T. B. Hamilton, Melrose; John Mackenzie, Edinburgh; N. F. MacHardy; D. A. Ogilvie, Cumnock; and W. A. Robinson, New Zealand—equal; 30. William Black, Dunfermline; R. W. Buchanan, Edinburgh; D. M. Callender, Edinburgh; P. V. Langmore, New South Wales; K. D. C. Macrae, Inverness; J. G. M'Bride, Edinburgh; Selden Spencer, St Louis, U.S.A.; T. B. Shaw, County Down; and A. R. Wallis, Epsom—equal; 39. C. H. Bösenberg, Cape Colony; Henry Buist, Dundee; Charles Douglas, Lockerbie; Andrew Grant, Ross-shire; A. A. Hall, Leith; J. K. Mathieson, Dingwall; and Daniel Mackinnon, Edinburgh—equal; 46. H. H. Robarts, London; A. B. Ross, Ross-shire; C. W. Saleeby; E. A. Walker; and R. T. Young, Glasgow—equal; 51. Alexander Rose, Nairn, and C. W. V. Rutherford, Roxburgh—equal; 53. James Brocket, Lanarkshire; D. M'K. Crooks, Jamaica; C. H. Houghton, Ireland; and T. H. Mackinnon, Aldershot—equal; 57. A. H. Baxter, Leith, and William Hume, Australia—equal; 59. James Kirkwood, Edinburgh; D. M. W. Murray, New Zealand; and S. W. M'Lean, Ireland—equal; 62. R. P. M'Neil, Stranraer, and H. P. Thompson, Lincolnshire—equal; 63. R. G. Adams, New Zealand.

DAVID HEPBURN, M.D., *Lecturer.*
WM. TURNER, Kt., M.B., *Professor.*

PRACTICAL PHYSIOLOGY.

First-Class Honours.—1. R. T. Baillie, Brechin, and Allan G. Waugh, Avonbridge—equal; 3. A. B. Ross, M.A., Ross-shire (*Medallists*); 4. R. V. Clark, M.A., Edinburgh, and T. B. Shaw, County Down—equal; 6. J. Brownlee, Edinburgh; A. C. Keay, Dunkeld; G. I. Lecesne, Jamaica; and B. P. Watson, Fifeshire—equal; 10. J. M'Kenzie, Edinburgh; 11. S. A. Ellerbek, Denmark, and C. W. Saleeby, Sussex—equal; 13. T. A. Smyth, Ireland; 14. S. Gilford, Surrey, and A. H. Reid, Trinidad—equal; 16. W. H. Swaffield, England, and J. Woods, Belfast—equal; 18. R. A. Belilos, India; 19. P. F. M'Farlan, Dumfriesshire; 20. C. H. Bösenberg, Cape Colony, and G. M'Farland, New Zealand—equal; 22. H. Buist, Dundee; W. H. Dickinson, Durham; W. Lee, Derbyshire; and W. M'Dougall, M.A., Rothes—equal; 26. F. I. Dawson, India; 27. T. M. Cuthbert, British Honduras; D. A. Stewart, London; and A. R. Wallis, Epsom—equal; 30. G. S. Murray, Bo'ness; 31. J. L. Duncan, Edinburgh; D. R. Macgregor, B.Sc., Dunfermline; G. R. Mill, Arbroath; Peterswald Pattison, Edinburgh; and Mowbray Ritchie—equal; 36. D. Mackinnon, Edinburgh, and Paul Mathews, Carlisle—equal; 38. D. Sutherland, Strathspey.

Second-Class Honours.—39. Adam Clark, Newton Stewart; 40.

J. E. M. Brown, Mauritius; 41. W. Eggeling, M.A., Edinburgh, and J. P. Grant, Broughty-Ferry—equal; 43. Maung Ba, Burmah, and C. J. Shaw, Perthshire—equal; 45. J. Dalgleish, British Guiana, and W. H. Prentice, Edinburgh—equal; 47. R. W. Buchanan, M.A., Edinburgh; J. Kirkwood, Edinburgh; T. H. Mackinnon, Aldershot; and D. A. Ogilvie, Cumnock—equal; 51. E. E. Brown, Auchterarder, and W. Goodchild, Westmoreland—equal; 53. R. J. Bradley, India; 54. W. Black, Dunfermline; 55. A. E. Hunter, Dalkeith; G. Pereira, Trinidad; L. W. Pole, Edinburgh; A. Rose, Nairn; and S. A. K. Wilson, M.A., New Jersey, U.S.A.—equal; 60. J. P. Kennedy, Ballinasloe, and F. L. Rigby, Preston—equal; 62. J. Wier, Ireland; 63. S. Garvin, Ireland, and S. Lyle, Ireland—equal; 64. J. F. Haegert, India; R. A. J. Harper, Midlothian; and F. E. Wilson, Leith—equal; 67. A. K. Baxter, Leith; R. C. Irvine, Tasmania; H. M'Calman, Lochfyne; A. F. G. Masson, Mauritius; and E. A. Walker, Forfarshire—equal; 72. A. J. Brock, Kirkliston; K. D. C. MacRae, Inverness-shire; and H. St J. Randell, Cape Colony—equal; 75. J. Brocket, Lanarkshire; 76. R. M. Grant, Inverness; N. C. R. Hansen, Copenhagen; and P. S. Tillard, Kent—equal; 79. R. E. W. Collins, India; 80. W. Hamilton, Ireland, and P. J. Hay, Switzerland—equal; 82. R. D. Brown, Edinburgh; E. P. Calder, Berwickshire; D. M'K. Crooks, Jamaica; and A. R. Hallam, Sheffield—equal; 86. R. V. Langmore, New South Wales; 87. J. G. M'Bride, Edinburgh; J. Miskelly, Ireland; and P. Telles, Trinidad—equal; 90. D. C. Henry, Creeton, and T. S. B. Williams, Bangor—equal.

WM. RUTHERFORD, M.D., *Professor.*

PRACTICAL MATERIA MEDICA.

First-Class Honours.—1. William Elliott Carnegie Dickson, Edinburgh; 2. Andrew Hunter, Edinburgh (*Medallists*); 3. William H. Prentice, Edinburgh; 4. John M. Dupont, Bedford, and William Macdougall, Rothes—equal; 6. John M'Kenzie, Edinburgh, and T. Brown Shaw, Ireland—equal.

Second-Class Honours.—8. James Halliday, Scotland; 9. William G. M'Neil, Stranraer; 10. Sydney G. Peill, Madagascar, and A. C. Peterson, Australia—equal; 12. Andrew E. Hunter, Scotland; 13. George M'Farland, New Zealand; 14. Edward P. Calder, Scotland; 15. Robert J. Baillie, Brechin; C. W. Saleeby, Sussex; and Ernest A. Walker, Scotland—equal; 18. John L. Rentoul, Ireland; 19. R. V. Clark, Edinburgh; Robert A. J. Harper, Dalkeith; Alexander R. Johnston, M.A., Forfar; and William Lee, England—equal; 23. Isaac Ivey, India, and Lawrence W. Pole, Scotland—equal; 25. Melville Scott, India; 26. F. Lindsay Rigby, England, and Charles W. Somerville, Dalkeith—equal; 28. Gavin A. Forrest, Motherwell; George A. Jolly,

Edinburgh; and David Sutherland, Strathspey—equal; 31. Andrew C. Keay, Dunkeld; Peter Murray, Morayshire; John Ross, M.A., Scotland; and Frederick E. Wilson, Leith—equal; 35. Robert Dods Brown, Scotland, and Robert E. Collins, India—equal; 37. Arthur R. Hallam, England, and Robert Murray, Roxburghshire—equal.

THOMAS R. FRASER, M.D., *Professor.*

PRACTICAL PATHOLOGY.

SENIOR DIVISION.

First-Class Honours.—1. Oswald A. Gee, England, and K. L. Teng—equal; 3. Y. Fukuda, Japan; 4. H. W. Boreham, England.

Second-Class Honours.—5. R. J. Ashbury, England.

JUNIOR DIVISION.

First-Class Honours.—1. J. G. S. Jamieson, Ayr; 2. G. Wright, Whitehaven; 3. J. C. Mitchell, D.Sc., Scotland, and James Munro, Dornoch (*Medallists*)—equal; 5. John Craig, Edinburgh, and D. Heron, Ireland—equal; 7. A. B. Black, Madras; 8. O. C. Bradley, England; H. J. Hoile, Scotland; and A. M. Wood, Leith—equal; 11. G. Scott Carmichael, Edinburgh, and R. A. Ross—equal; 13. E. B. Jamieson, Shetland, and H. D. Shepherd, Wigan—equal; 15. Andrew Fleming, Edinburgh; Alex. Trotter, Perth; and W. Wallace, Berwick-on-Tweed—equal; 18. T. H. W. Alexander, R. G. Leach, Rochdale; J. G. Mackenna, Dumfries; J. C. Parker, Alloa; and S. R. Sibbald, Scotland—equal; 23. H. J. Maclean, New Zealand, and John Pender, Dumfriesshire—equal.

Second-Class Honours.—25. W. Frost, Ireland; W. Girdwood, and W. S. Wells, Burma—equal; 28. S. A. Ballantyne, Scotland, and Charles Platt, United States—equal; 30. H. Harris, England, and F. D. Simpson, Bathgate—equal; 32. Norman Patterson, Scotland; L. C. Peel Ritchie, Scotland; and J. A. Smail, Edinburgh—equal; 35. D. FitzWilliams, Wales, and J. F. Selkirk, Aberdeen—equal; 37. W. P. Cormac, Tain; 38. Robert Affleck, Galloway; Alexander Frew, Ayrshire; James Geikie, Scotland; and S. Rattray, Edinburgh—equal; 42. E. L. Melhuish; 43. William Eadie, Cumberland; W. E. Herbert, New Zealand, and A. A. Martin, New Zealand—equal; 46. J. H. M'Kee; David Robertson, Scotland; and J. H. Thornley, Cumberland—equal; 49. John Bell, Edinburgh; J. H. Meikle, Inverary; J. B. Milne, Montrose; M. C. Morgan, Wales; J. K. A. Robertson, Greenock; R. A. Savage; G. B. A. Speirs, Cumberland; and T. Grainger Stewart, Edinburgh—equal; 57. C. Balfour Paul, Edinburgh; 58. L. J. Hood, Australia; 59. H. Bishop, Trinidad, and J. R. Prytherch, Anglesey—equal; 61. W. L. G. Anderson, Scotland;

H. C. Nixon, England; and T. J. S. Wilson, Tasmania—equal; 64. Edward Ewart, James C. Gilchrist, and J. A. Smith, Ireland—equal; 67. J. M. L. Brown, Ayr, and J. B. Primmer—equal; 69. W. Hutchison, Scotland, and F. M. Wigg—equal; 71. G. F. Buist, Fred. Hardie, Kirkcaldy; A. C. N. M'Hattie, West Indies; C. E. Southon, India; A. D. Spence, Montrose; and M. A. Swan, Paisley—equal; 77. F. K. Kerr, Leith; A. C. Lennie, Edinburgh; G. D. Whyte, London; and J. H. Wrightson, England—equal; 81. A. Brydon, Scotland; F. C. Matthew, Corstorphine; H. M. Speirs, England; and A. J. Williamson, Scotland—equal; 85. H. E. Arbuckle, Natal; A. J. Baird, Scotland; J. S. Enslin, South Africa; and J. L. Rentoul, Ireland—equal; 89. W. C. Ross, Ayrshire; C. B. Snow; and A. J. Mackenzie—equal; 92. L. N. Biggs, India; R. Hamilton, Bradford; P. J. Hay, Switzerland; C. B. M'Conaghy, India; and A. G. Watson, Southport—equal.

Absent through illness from one examination—J. C. Kennedy, Wales.

W. S. GREENFIELD, M.D., *Professor.*

OPERATIVE MIDWIFERY AND GYNECOLOGY.

First-Class Honours.—1. A. C. M'Gilchrist, Islay, and A. C. Sandstein, New Zealand—equal (*Medallists*); 3. J. H. Rhodes, Kendal; 4. A. Dingwall Fordyce, Edinburgh; 5. R. F. M'Nair Scott, Singapore; 6. Edward M'Culloch, Edinburgh; 7. D. J. Hughes, N. Wales; 8. A. Shearer, Orkney; 9. E. H. Brunt, England; 10. Henry Wade, Falkirk, 11. Robert Gibson, Wigtownshire, and W. E. Tellett, Bridge of Allan—equal; 13. J. M. Cuthbert, Scotland, and G. F. B. Simpson, Edinburgh—equal.

Second-Class Honours.—15. J. M. Bowie, Edinburgh; 16. Alexander Goodall, Scotland.

A. R. SIMPSON, M.D., *Professor.*

FORENSIC MEDICINE.

First-Class Honours.—1. Henry J. Hoile and John Pender—equal; 3. John Craig and James G. S. Jamieson—equal (*Medallists*); 5. G. H. Hanna; 6. G. Scott Carmichael; 7. O. C. Bradley; 8. James M. L. Brown, James C. Gilchrist, William P. Cormack, Alexander Trotter, and William Wallace—equal; 13. Robert Affleck, J. H. Bell, and George Thomson—equal.

Second-Class Honours.—16. W. Girdwood and John George Mackenna—equal; 18. F. C. Matthew and Frank Young—equal; 20. Alexander J. Baird, Charles Fraser, and R. A. Ross—equal; 23. W. L. G. Anderson and James Stewart Geikie—equal; 25. James C. Parker and John B. Primmer, equal; 27. Thomas H. W. Alexander and G. Wright—equal; 29. Norman Patterson; 30. Simon A. Ballantyne, George A. Davidson, Edward Ewart, Edward B. Jamieson, Alexander Mouat, L. C. Peel Ritchie, and F. D. Simpson—equal; 37. John A. Smail; 38. Malcolm Camp-

bell, H. E. Coghlan, Alexander Malcolmson, James Munro, and Charles B. Snow—equal; 43. Owen Lewellin Rhys and G. Reynolds Turner—equal; 45. A. Branfoot Black, William E. Frost, Horace C. Nixon, and C. Balfour Paul—equal; 49. Herbert Harris, D. Heron, Francis F. C. Jagger, Francis K. Kerr, Langworthy Lawrie, W. E. M'Farlane, J. R. Prytherch, and David J. Roberts—equal; 57. A. Brydon, Alexander Frew, Arthur D. Spence, and Norman S. Wells—equal; 61. H. Bishop, Duncan Fitzwilliams, George W. Guthrie, Frederick Hardie, S. Ramsay Sibbald, Matthew A. Swan, and G. Duncan Whyte—equal; 68. Drummond J. Fergusson, Sam Rattray, and Basil A. Spence—equal; 71. George F. Buist, J. Gordon M'Dougall, Alexander J. Mackenzie, H. J. M'Lean, and William S. Scott—equal; 76. Henry Alexander, Charles M. Anderson, J. Anderson, L. N. Biggs, John P. Campbell, G. S. Carey, A. B. Flett, John L. Green, Gavin Grey, R. Gerald Leach, Arthur C. Lennie, James Lindsay, Dundas S. Macknight, J. M. A. Macmillan, A. C. N. M'Hattie, and Arthur A. Martin—equal; H. Crichton Miller, M.A., James Miller, J. Brownlee Milne, J. K. A. Robertson, G. A. P. Ross, R. Rutherford, R. A. Savage, T. S. Shepherd, J. Smith, and George H. Steven—equal.

Essay on Abattoirs.—1. J. G. MacKenna (*Prize*); 2. George Thomson and Arthur A. Martin—equal; 4. J. Keith, A. Robertson, D. Duncan Paton (Law) (*Prize*), Dundas S. M'Knight, H. J. M'Lean, John P. Campbell, W. E. Frost, and H. J. Hoile—equal; 11. Thomas H. W. Alexander, Norman S. Wells, and W. Girdwood—equal.

Best Account of Dissections performed in the Class.—1. George Reynolds Turner (*Prize*); 2. Arthur C. Lennie and Arthur A. Martin—equal; 4. Alexander Frew; 5. James G. S. Jamieson; 6. Edward Jamieson; 7. H. M. Speirs.

HENRY D. LITTLEJOHN, Kt., M.D., *Professor.*

MENTAL DISEASES.

First-Class Certificates.—1. W. J. Barclay; 2. David Ewart, R. F. Jardim, J. L. Louis, and James Masson, M.A., B.Sc.—equal (*Medallists*); 6. Thomas D. M'Laren; 7. J. G. Galbraith and Angus Whyte—equal; 9. A. Hume Griffith; 10. John D. Comrie, M.A., B.Sc., George Thomson, and W. J. Stuart—equal; 13. J. Fullarton, Arthur Preston, W. Ewart, D. B. King, M.A., and Thomas A. Price—equal; 18. B. J. Courtney and James Miller—equal; 20. J. Jeffrey; 21. William Park and G. G. Hay—equal; 23. William Reid; 24. P. W. Hampton, R. M. Rowe, and W. J. M. M'Farlan—equal; 27. James Orr and Stewart Grant Ogilvy, M.B.—equal.

Second-Class Certificates.—29. Maxwell Mackelvie and J. G. Jack—equal; 31. Sydney H. Morris, G. D. Laing, and J. Allen

Scotland—equal; 34. L. W. Macpherson and J. Lückhoff—equal; 36. P. A. Maclagan; 37. A. S. Whytock; 38. John H. Gordon and W. M. Mackay—equal; 40. E. M'K. Young, David Fenton, D. A. Callender and P. H. Macdonald—equal; 44. J. K. M. Hermon and L. M. Wedderburn—equal; 46. E. Archer Brown; 47. J. C. Carr; 48. Henry G. Carlisle; 49. C. E. Smith and G. M'Kie—equal; 51. S. L. Dawkins; 52. T. C. Mackenzie; 53. J. A. Thompson; 54. J. W. Kerr; 55. David Robertson; 56. C. S. Vartan.

T. S. CLOUSTON, M.D., *Lecturer.*

DISEASES OF THE EYE.

First-Class Certificates.—1. C. H. J. Watson; 2. James Masson, M.A., B.Sc.; 3. J. Ramsay Munro (*Medallists and Prizemen*); 4. Ernest J. Peill; 5. J. Lückhoff (*Prizemen*); 6. Arthur Preston, R. G. Thomson, William Park, George Lyon, and T. D. M'Laren—equal; 11. R. M. Rowe; 12. W. E. Frost and D. Ewart—equal; 14. Y. A. Djedjizian; 15. G. G. Hay, J. M. Reid, George Mackay, and J. H. Gordon—equal; 19. J. L. Louis and P. H. Macdonald—equal; 21. L. D. H. Baugh and T. P. Oates—equal; 23. J. G. Jack, W. M. Mackay, and D. B. King, M.A.—equal.

Second-Class Certificates.—26. W. Ewart, W. Reid, and E. M'Killop Young—equal; 29. H. D. Wilson; 30. T. C. Mackenzie; 31. W. J. M'Farlan and W. G. Thompson—equal; 33. D. H. Callender; 34. C. E. Smith; 35. P. W. Hampton; 36. S. Jacob; 37. R. R. Fasson; 38. A. N. de Gruchy, A. Tweedie, W. G. Williams, W. C. Spooner, and S. Southall—equal; 43. David Robertson, J. K. M. Hermon, and F. G. Hathway—equal; 46. A. S. Parker, Robert Ritchie, T. R. Robertson, J. W. Mathewson, J. Wishart Kerr, James Huband, C. E. Hutson, D. R. Evans, Cyril H. Durrant, D. Fenton, and P. J. Courtney—equal; 57. F. C. Caldwell and J. Aird—equal; 59. M. Carthew, A. P. L. Brown, W. J. D. Bromley, John A. Black, and S. L. Dawkins—equal; 64. W. J. Collinson, W. D. S. Harrison, R. M. Dalziel, D. F. Jardim, J. Ross Laing, and John Thornhill—equal; 70. P. A. Maclagan, M. M. Meikle, L. C. M. Wedderburn, K. H. H. Uffmann, Bernard Stracey, W. C. Macdonald, R. A. Macneill, Miles Johnston, W. T. James, J. Spencer Low, and G. A. Lowther—equal.

GEORGE A. BERRY, M.B., *Lecturer.*

DISEASES OF THE LARYNX, EAR, AND NOSE.

First-Class Honours.—1. David Ewart (*Prizeman*); 2. H. J. Maclean; 3. W. J. Barclay; 4. G. G. Hay and G. A. Djedjizian—equal; 6. William Ewart.

Second-Class Honours.—7. H. T. Holland; 8. G. D. Laing; 9. J. A. Thomson.

P. M'BRIDE, *Lecturer.*

WINTER SESSION, 1898-99.

CHEMISTRY.

ROBERT WILSON MEMORIAL PRIZE.—Cameron R. Gibson. *Proxime accesserunt*—A. R. Normand and T. Peebles.

FIRST-CLASS HONOURS.—1. Cameron R. Gibson, Gretna, and Alex. R. Normand, Edinburgh—equal; 3. Thomas Peebles, Edinburgh, and Clerk Ranken, Edinburgh—equal; 5. Harry Caird, Musselburgh; 6. Andrew A. Hall, Leith, and J. K. H. Inglis, New Zealand—equal (*Medallists*); 8. David H. Ash, Perth; Alex Bruce, Edinburgh; and W. Morton, Edinburgh—equal; 11. John M'Dowall; 12. G. Staunton Husband; 13. D. Duncan Paton; 14. J. Allan Anderson, Edinburgh; Edward S. Edie; C. R. F. Hartley, Thirsk; and J. Robertson M'Gregor, South Africa—equal; 18. A. S. Gordon, Bathgate; Robert Hamilton, Dumfriesshire; Charles H. Muller, South Africa; and Ernest A. Turpin, Tobago—equal; 22. L. A. H. Lack and J. A. Roux—equal; 24. J. Michael Dewar, Edinburgh; 25. John Lauder; Grahame H. Skinner, Edinburgh; and George J. Wentzel—equal; 28. John Trotter, Edinburgh; 29. John Hunter Kay, Ayrshire; Hugh Lennox Munro, Frodingham; L. J. Riley; James B. Rodger, Forfar; and W. Dundas Wright, Eastbourne—equal.

SECOND-CLASS HONOURS.—34. C. Edgar Dumanoire, Trinidad; 35. G. W. Young, Cape Town; 36. T. T. Thomson, England; 37. P. W. Mason, New Zealand; 38. Alexander Gray, Edinburgh; Hugh J. C. Kinghorn, Leith; and James M. Kirkness, Edinburgh—equal; 41. Louis Fourie; H. MacCormac, Ireland; and J. M. Macrae, Edinburgh—equal; 44. N. Cecil Rutherford, Shipley; 45. John Brennan, Co. Clare; John D. Giles, Edinburgh; and W. R. Spencer Watkins, Wales—equal; 48. Charles Mackie, Perth; 49. G. W. Armstrong, Wales; J. R. Dobbin, Banbridge; Hugh N. Fletcher; J. Graham; F. R. Paterson, Langholm; and F. G. Saleeby, Edinburgh—equal; 55. Harold C. Long; 56. John E. Geddes, Wick; D. J. Harries; W. S. Pillans, New Zealand; and Alfred C. T. Woodward—equal; 60. C. Hawkins Craig, Victoria; John Halley, Scotland; Gordon S. Mackay, Aberfeldy; W. Mackenzie; G. D. Mathewson, Dunfermline; John Easton Scott, England; and Walter M. Selby, Wigtownshire—equal; 67. Arthur Dangerfield, Edinburgh; A. N. Fraser, Falkirk; and D. S. Rabagliati, Bradford—equal; 70. Charles L. Eyles; Laurence Gavin, Westmeath; J. W. Keay; John M. Lovett; William M'Laren, Arbroath; and G. H. Winch, Yorkshire—equal; 76. Charles B. Robertson; John Tait; C. T. Walker, Tasmania; F. A. Wille, Cape Colony; and John Wishart, Edinburgh—equal; 81. John Bennett M'Neill, Edinburgh, and R. M. Mainwaring White, Goole—equal; 83. William H. Cusack, Limerick; A. W. Madsen; J. Leighton Peters, Dundee; Leslie

C. Robinson, Valetta; and Ernest T. Steele, Kendal—equal; 88. A. B. Cox; W. Sibbald Robertson, Whitsome; and Robert H. Watt, Edinburgh—equal; 91. G. D. W. Millikin, Thurso; David Jobson Scott, Montrose; and Ebenezer H. Scott—equal.

PRACTICAL CHEMISTRY.

First-Class Honours.—1. Cameron R. Gibson; 2. Thomas Peebles, Edinburgh; 3. G. Staunton Husband and William Cuthbert Morton, Trinidad—equal (*Medallists*); 5. H. Caird; 6. John Lauder, Ayrshire; 7. David Herd Ash, Perth; John M. Dewar; and P. W. Mason, New Zealand—equal; 10. Hugh S. Davidson, Melrose; C. Edgar Dumanoire, Trinidad; L. A. H. Lack; J. A. Roux, Cape Colony; and Ernest A. Turpin, Tobago—equal; 15. J. Allan Anderson, Edinburgh; James M. Kirkness, Edinburgh; H. P. Robarts; and T. T. Thomson, India—equal; 19. W. W. Anderson, Dwarka Prasad Goil, Meerut, India; Andrew A. Hall, Leith; John Hunter Kay, Cumnock; William Sanderson, Tranent; and John Trotter—equal; 25. G. W. Young, Cape Town; 26. Charles H. Muller, South Africa; 27. G. W. Armstrong; John M. Lovett, J. Robertson M'Gregor, South Africa; William M'Laren, H. Lennox Munro, and Norman C. Rutherford—equal; 33. John Halley; H. MacCormac, Ireland; and Ewen J. Taylor, Cupar—equal; 36. Alexander Gray; 37. L. Fourie, Cape Colony; and J. Easton Scott—equal; 39. C. R. F. Hartley, Thirsk; Ernest Muir, Leslie C. Robinson, and Grahame H. Skinner—equal.

Second-Class Honours.—43. Daniel Allison, Carluke; and Algernon F. Hughes, Grenada—equal; 45. J. Graham and David Jobson Scott—equal; 47. Arthur Dangerfield, Edinburgh; 48. F. G. Saleeby; 49. A. N. Fraser, Falkirk, and J. Bennet MacNeill—equal; 51. A. Campbell Geddes, D. Duncan Paton, and W. Sibbald Robertson—equal; 54. John Allan; Gilbert J. Farie; A. S. Gordon, Bathgate; A. G. M. Middleton; D. S. Rabagliati; and W. R. Spencer Watkins, Wales—equal; 60. Douglas E. Derry and G. J. Wentzel—equal; 62. A. B. Cox, John D. Giles, Edinburgh; R. W. Johnstone, Fred. T. C. Linton, Robert H. Watt, C. T. Walker, and G. H. Winch—equal; 69. Ernest G. Girdwood, South Africa; and J. W. Keay—equal; 71. James Davidson, Edinburgh; N. Douglas Mackay, Aberfeldy; and W. H. Nutt—equal; 74. S. Burns, Ayr; and Robert Veitch—equal; 76. Edward S. Edie and John L. Peters—equal; 78. H. N. Fletcher and I. C. Keir—equal; 80. C. Hawkins, Craig, Victoria; G. O. Norrie, W. Hay Robertson, and W. S. Yeaman—equal; 84. W. F. Basson, Charles L. Eyles, and J. M. Macrae—equal; 87. Daniel Ward; 88. T. P. Caverhill, G. D. W. Millikin, J. Arthur Robinson, and John Tait—equal; 92. John Brennan, Co. Clare; F. E. Larkins, and C. Kelman Smith—equal; 95. S. W. S.

Leary, and W. Dundas Wright—equal; 97. James Girdwood, Herbert A. Jack; A. B. Spence, Burntisland; and F. A. Wille, Cape Colony—equal; 101. A. E. Hodgson; 102. John Fortune and P. E. R. Weatherdon—equal; 104. William Beggs, Ireland.

ALEX. CRUM BROWN, M.D., *Professor.*

ELEMENTARY ZOOLOGY.

First-Class Honours.—1. D. Duncan Paton; 2. James Girdwood (*Medallists*); 3. C. L. Eyles and John Lauder—equal; 5. D. P. Goil; 6. J. M. Dewar and J. Henderson Smith—equal.

Second-Class Honours.—8. E. G. Girdwood; 9. W. F. Basson; 10. H. Speirs; 11. F. H. Gibson and R. Buchanan—equal; 13. L. Turiansky; 14. Geo. J. Wentzel; 15. T. T. Thomson.

PRACTICAL ZOOLOGY.

First-Class Honours.—1. John Lauder (*Medallist*).

Second-Class Honours.—2. James Girdwood; 3. J. C. Keir; 4. C. R. F. Hartley; 5. Samuel Burns, Alexander Gray, and Hugh L. Munro—equal.

J. C. EWART, M.D., *Professor.*

PHYSICS.

First-Class Honours.—1. Hugh S. Davidson, Melrose; 2. P. W. Mason, New Zealand (*Medallists*); 3. Harry Caird, Scotland; 4. G. S. Husband, Jamaica; 5. Eva A. Robertson, Dunkeld; 6. Thomas Peebles, Scotland; 7. James Davidson, Edinburgh.

Second-Class Honours.—8. Sheila M. Ross, Appin; 9. Elizabeth L. Colby, London; 10. J. D. Giles, Edinburgh; and Dwarka Prasad Goil, Meerut, India—equal; 12. G. H. Skinner, Scotland; 13. A. C. Geddes, London; 14. J. A. Anderson, Edinburgh; 15. John Fortune, Scotland; G. M. Coughtrey, New Zealand; and L. C. Robinson, Malta—equal; 18. N. C. Rutherford, England; 19. Arthur Dangerfield, Edinburgh; 20. H. S. Coghill, Ventnor; G. S. Mackay, Scotland; and A. W. K. Straton, England—equal; 23. W. S. Robertson, Berwickshire; 24. Daniel Allison, Kilncadzow; 25. J. M. Kirkness, Scotland; J. B. M'Neil, Edinburgh; W. M. Selby, Wigtownshire; and E. A. Turpin, Tobago—equal; 29. Mabel Ross, Edinburgh; 30. A. G. M. Middleton, Dollar, and William Sanderson—Tranent—equal; 32, H. N. Fletcher, Norwich; J. W. Keay, Scotland; and Baba Makhan Singh Sodhi, Punjab—equal.

C. E. Dumanoire, Trinidad, obtained 74 per cent. of the available marks in the first examination, but was prevented by illness from taking part in the second examination.

C. G. KNOTT, D.Sc., *Lecturer.*

PRACTICAL ANATOMY.

STUDENTS OF THE THIRD YEAR.

First-Class Honours.—1. G. R. Mill, Arbroath; and C. W. Saleeby, Sussex—equal; 3. William Miller, Edinburgh; H. L. Spark, Forfar; and A. G. Waugh, Avonbridge—equal; 6. R. A. Bellios, Calcutta; 7. W. E. Carnegie Dickson, B.Sc., Edinburgh; C. W. Howe, Edinburgh; Andrew Hunter, Edinburgh; A. R. Johnstone, Forfarshire; A. C. Keay, Dunkeld; J. C. Mitchell, D.Sc., Edinburgh; G. S. Murray, Bo'ness; L. T. Price, Shropshire; G. C. I. Robertson, Aberdeen; and T. A. Smyth, Ireland—equal; 17. R. T. Baillie, Kinnaird; James Halliday, Dumfries; R. A. J. Harper, Midlothian; G. A. Jolly, Edinburgh; Sam. Lyle, Ireland; K. D. C. Macrae, Inverness-shire; P. F. M'Farlan, Dumfriesshire; Geo. M'Farland, New Zealand; F. L. Rigby, Preston; T. B. Shaw, Co. Down, Ireland; E. A. Walker, Forfarshire; and James Woods, Belfast—equal; 29. James Brownlee, Edinburgh; W. A. Duncan, Edinburgh; J. R. Edward, Musselburgh; A. H. Firth, M.A., Edinburgh; A. L. Gurney, Jersey; A. R. Hallam, Sheffield; A. E. Hunter, Eskbank; J. P. Kennedy, Ireland; G. Ivanhoe Leecsne, Jamaica; J. H. Meikle, M.A., B.Sc., Argyleshire; Wm. Macdougall, M.A., Rothes, N.B.; and W. G. Porter, B.Sc., India—equal; 41. G. C. Burgess, Aberdeen; A. W. S. Christie, Fife; J. M. Dupont, Bedford; A. T. Gavin, Ayrshire; Thomas Mill, New Zealand; J. G. M'Bride, Edinburgh; L. T. M'Clintock, Salop; H. K. Macdonald, Sutherlandshire; F. E. Wilson, Leith; and R. T. Young, Glasgow—equal; 51. Gurth Blandy, Woolwich; James Brockett, Lanarkshire; R. V. Clark, Edinburgh; R. M. Grant, Inverness; C. H. Lindsay, Ireland; D. A. Ogilvie, Ayrshire; W. S. Patton, India; E. T. Potts, Harrogate; and W. H. Prentice, M.A., Edinburgh—equal; 60. J. F. Allan; R. V. C. Ash, Natal; E. P. Calder, Berwickshire; J. L. Duncan, Edinburgh; N. C. R. Hansen, B.A., Denmark; D. C. Henry, Kirkbride; William Landsborough, Kilmarnock; N. F. M'Hardy, Argyleshire; and A. J. de Spiganovicz, Odessa—equal; 69. G. A. Forrest, Motherwell; P. V. Langmore, New South Wales; William Mair, M.A., Edinburgh; and D. A. Stewart, London—equal; 73. R. W. Buchanan, M.A., Edinburgh; 74. Henry Buist, Dundee, and P. S. Tillard, Kent—equal; 76. Stephen Garvin, Ireland; R. H. Martin, Newry, Ireland; J. B. M'Cutcheon, Ireland; and A. L. Roxburgh, Ayrshire—equal; 80. William Brown, Galashiels; D. G. Carmichael, Calcutta; M. W. Robertson, Edinburgh; J. A. L. Wallace, Turriff; and A. R. Wallis, Epsom—equal; 85. J. M'B. Taylor, Edinburgh; 86. J. W. Duffus, Edinburgh; John Duncan, Kinross; T. A. M'Kenzie, Edinburgh; G. C. Strathairn, Perthshire; and T. L. Thomson, London—equal; 91. George M'Neil,

Haddington; and T. B. Paterson, Edinburgh—equal; 93. W. J. Crow; 94. M. W. Smart, Edinburgh, and David Sutherland, Strathspey—equal; 96. C. W. V. Rutherford, Roxburghshire.

SECOND-CLASS HONOURS.—97. Reginald Rorie, Dundee.

JUNIOR PRACTICAL ANATOMY.

FIRST-CLASS HONOURS.—1. D. M. Callender, Edinburgh; C. J. Shaw, Perthshire; and B. P. Watson, Largs (*Medallists*)—equal; 4. S. A. Ellerbek, Denmark; 5. John Dunlop, Lanark; Henry Herd, M.A., Leith; and W. Sibbald Robertson, Berwickshire—equal; 8. Archibald Brownlee, Fauldhouse; E. A. Braine, Montrose; C. H. Bösenberg, B.A., Cape Colony; and John Politachi, Manchester—equal; 12. C. M. Campbell, Edinburgh; J. S. Elliot, New Zealand; and W. A. Robinson, B.A., B.Sc., New Zealand—equal; 15. Wilbert Goodchild, Westmoreland; Daniel M'Kinnon, Edinburgh; and S. A. K. Wilson, New Jersey, U.S.A.—equal; 18. R. G. W. Adams, New Zealand; William Bennett, Ireland; R. C. Low, Edinburgh; Alex. Rose, Nairn; W. M. Selby, Wigtownshire; and G. D. Sloan, London—equal; 24. T. H. Osler, Cape Colony; J. S. Sewell, Hexham; and W. F. Smeall, Jedburgh—equal; 27. J. W. Cathles, Edinburgh; and Henry Curwen, St Andrews—equal; 29. J. M. Johnstone, Muirkirk, and E. M. Reece, Birmingham—equal; 31. A. M. Caverhill, Jedburgh; 32. D. M'K. Crooks, Jamaica; Maurice Davies, Wales; William Lilico, Ireland; A. M'G. Sharp, M.A., Galashiels; and W. E. Young, Airdrie—equal; 37. T. B. Hamilton, Melrose; and H. M. Stumbles, Buckinghamshire—equal; 39. Harold Kerr, London; and Philip Vickers, Jamaica—equal; 41. W. W. Anderson, Belfast; A. G. M. Middleton, Rangoon; and A. B. dos Remodios, Goa—equal.

SECOND-CLASS HONOURS.—44. John Hunter, Musselburgh; 45. W. F. Macdonald, Inverness; 46. D. I. Anderson, Kingston-on-Thames.

LECTURES ON ANATOMY.

SENIOR STUDENTS.

FIRST-CLASS HONOURS.—1. Peter Murray, M.A., Morayshire (*Medallist*); 2. A. H. M'Shine, Trinidad.

SECOND-CLASS HONOURS.—3. R. E. Russell, Cape Town; 4. W. A. Robinson, B.A., B.Sc., New Zealand.

STUDENTS OF THE FIRST YEAR.

FIRST-CLASS HONOURS.—1. John Tait, Orkney; 2. Andrew A. Hall, Leith; and Thomas Peebles, Edinburgh—equal; 4. Henry H. Robarts, England (*Medallists*); 5. Hugh S. Davidson, Melrose; J. M. Kirkness, Edinburgh; and P. W. Mason, New Zealand—

equal; 8. Matthew Holmes, New Zealand; 9. D. M. Callender, Edinburgh; J. S. Elliott, New Zealand; and John Lauder, Kilmarnock—equal; 12. C. R. Gibson, M.A., Gretna; and W. C. Morton, M.A., Trinidad—equal; 14. Alexander Gray, Perthshire; and H. L. Munro, Brigg—equal; 16. C. R. F. Hartley, Yorkshire; J. H. Kay, Ayrshire; and T. T. Thomson, England—equal; 19. J. M. Dewar, Kirriemuir; and G. H. Skinner, Forfar—equal; 21. D. E. Derry, Middlesex; A. N. Fraser, Falkirk; and E. J. Taylor, Cupar—equal; 24. Harry Caird, Leith; C. E. Dumanoire, Trinidad; J. D. Giles, Edinburgh; E. A. Turpin, West Indies; and Robert Veitch, Edinburgh—equal; 29. W. Sibbald Robertson, Berwickshire; and A. M'G. Sharp, M.A., Galashiels—equal; 31. Daniel Allison, Lanarkshire; S. C. Ellison, Co. Louth; H. N. Fletcher, Norwich; G. S. Husband, Jamaica; William Mackenzie, Elgin; and Henry Speirs, Berwickshire—equal.

Second-Class Honours.—37. D. Duncan Paton, Carnoustie; 38. F. T. C. Linton, Edinburgh; and David Sandler, Russia—equal; 40. J. A. Anderson, Edinburgh; 41. Arthur Dangerfield, Edinburgh; A. N. Fell, New Zealand; L. A. H. Lack, Trinidad; and William Sanderson, Tranent—equal; 45. E. G. Girdwood, South Africa; John Halley, Perth; and J. H. Smith, B.A., Edinburgh—equal; 48. F. S. B. Fletcher, Yorkshire; and A. C. Geddes, London—equal; 50. James Davidson, Berwick; J. W. Keay, Perthshire; and Ernest Muir, Banff—equal; 53. F. W. Lundie, Cape Colony; 54. J. H. Connolly, Ireland; James Girdwood, Ayr; and A. Chad T. Woodward, Worcestershire—equal; 57. T. P. Caverhill, Northumberland; C. H. Craig, Edinburgh; J. B. M'Neill, Edinburgh; N. C. Rutherford, Yorkshire; and J. F. van de Sandt de Villiers—equal; 62. G. W. Armstrong, Wales; G. C. G. Carmichael, Calcutta; W. B. A. K. Cullen, Carlisle; and F. H. Gibson, Buckinghamshire—equal; 66. J. M. Lovett, Nottinghamshire; and Ian M. Macrae, Inverness-shire—equal; 68. Thomas Nicol, Edinburgh; and J. A. Roux, Cape Colony—equal; 70. R. M. Mainwaring-White, Leicester; W. F. Macdonald, Inverness; and C. K. Smith, Banffshire—equal; 73. J. J. M'L. Falconer, Lasswade; and G. J. Wentzel, Cape Colony—equal; 75. William MacLaren, Forfarshire; F. G. Saleeby, Palestine; and G. W. Young, London—equal; 78. W. H. Davison, Co. Tyrone; Laurence Gibson, Aberdeen; and R. F. Vinen, London—equal; 81. Samuel Burns, Ayr, and C. R. P. Mitchell, Glasgow—equal; 83. Angus Buchanan, Argyleshire; F. D. Crosthwaite, Edinburgh; A. S. Gordon, Bathgate; T. M. Guthrie, Edinburgh; A. G. M. Middleton, Rangoon; William M'Conaghy, India; and J. H. D. Webster, Edinburgh—equal; 90. W. Dundas Wright, London; 91. D. E. C. Pottinger, Cumberland; 92. E. A. Elder, Edinburgh; J. C. Keir, Wiltshire;

R. S. Munro, Nantwich; G. S. Mackay, Aberfeldy; and Archibald Simpson, Tranent—equal; 97. W. A. Cowan, Edinburgh; John Fortune, Fifeshire; and N. D. Mackay, Perthshire—equal; 100. D. I. Anderson, Kingston-on-Thames; G. A. Davies, Wolverhampton; David Golding, New Zealand; A. E. Hodgson, Yorkshire; Neil M'Leod, Edinburgh; G. O. Norrie, Edinburgh; and W. H. Robertson, Argyleshire—equal.

The SENIOR "JOHN AITKEN CARLYLE" BURSARY in *Anatomy and Physiology* was awarded to R. E. Russell, Cape Colony.

The JUNIOR "JOHN AITKEN CARLYLE" BURSARY in *Anatomy and Chemistry* was awarded to Thomas Peebles.

The MACKENZIE BURSARIES FOR PROFICIENCY IN DISSECTING were awarded to:—R. E. Russell, Capetown, and C. H. Bösenberg, B.A., Cape Colony—equal; R. G. Adams, New Zealand, and W. Y. Woodburn, Australia—equal.

Proxime Accessurunt.—C. J. Shaw, Perthshire, and B. P. Watson, Largo.

CERTIFICATES OF PROFICIENCY IN DISSECTING were awarded to:—John Dunlop, Lanark; Wilbert Goodchild, Westmoreland; Daniel Mackinnon, Edinburgh; and James Sewell, Hexham.

The following gentlemen acted as Prosectors to the Class:—

A. L. Gurney, Jersey.
G. R. Mill, Arbroath.
W. S. Patton, India.
H. L. Spark, Forfar.

DAVID HEPBURN, M.D., *Lecturer.*
WM. TURNER, Kt., M.B., *Professor.*

PHYSIOLOGY.

SENIOR DIVISION.

FIRST-CLASS HONOURS.—1. Peter Murray, M.A., Morayshire; 2. R. T. Baillie, Brechin; G. R. Mill, Arbroath; and A. G. Waugh, Avonbridge—equal; 5. W. E. C. Dickson, B.Sc., Edinburgh (*Medallists*); 6. A. R. Johnston, Scotland; J. M'Kenzie, Edinburgh; and C. W. Saleeby, Sussex—equal; 9. G. C. Burgess, Aberdeen; and J. Woods, Belfast—equal; 11. J. Halliday, Dumfries; 12. R. V. Clark, Edinburgh; A. C. Keay, Scotland; and S. Lyle, Ireland—equal; 15. H. L. Spark, Forfar; 16. J. Brownlie, Edinburgh; R. W. Buchannan, Scotland; G. S. Murray, Bo'ness; G. C. I. Robertson, Clackmannan; and T. B. Shaw, Ireland—equal; 21. A. L. Gurney, Jersey; and P. F. M'Farlan, Dumfries—equal; 23. D. C. Henry, Creetown; 24. R. J. Bradley, India; and D. A. Ogilvie, Cupar—equal; 26. E. P. Calder, Berwickshire; W. H. Dickinson, England; A. H. Firth, Edinburgh; W. Millar, Edinburgh; W. H. Prentice, Edinburgh; and A. R. Wallis, Epsom—equal; 32. C. C. Choyce, New Zealand; 33. J. Dalgleish, British Guiana.

Second-Class Honours.—34. T. F. Cavanagh, Ireland; and G. W. R. Skeen, Ceylon—equal; 36. E. A. Walker, Forfar; 37. H. Buist, Dundee; and W. S. Patton, India—equal; 39. R. A. J. Harper, Dalkeith; and S. G. Peill, Madagascar—equal; 41. V. C. de Boinville, Westmoreland; and F. E. Wilson, Scotland—equal; 43. A. Gavin, Scotland; and W. G. Porter, India—equal; 45. J. F. Allan, Strathspey; A. R. Hallam, Sheffield; W. H. Meyer, British Guiana; L. W. Pole, Edinburgh; M. W. Smart, Edinburgh; and D. A. Stewart, London—equal; 51. D. M. Aitken, Singapore; 52. J. R. Edward, Scotland; C. W. Howe, Edinburgh; D. Munro, Herts; and T. S. B. Williams, Wales—equal; 56. A. A. Ayton, Jamaica; A. J. Brock, Kirkliston; R. E. Collins, India; J. E. M'Bride, Edinburgh; J. H. H. Pirie, Aberdeen; and J. A. L. Wallace, Turriff—equal; 62. A. Brown, Scotland; E. E. Brown, Scotland; W. Eggeling, Scotland; O. J. Evans, Wales; G. A. Jolly, Edinburgh; H. St J. Randall, Cape Colony; J. Sullivan, Scotland; and P. S. Tillard, Kent—equal; 70. W. Hamilton, Ireland; 71. D. E. S. Park, England; F. L. Rigby, Preston; and E. J. Tyrell, Scotland—equal; 74. J. Brocket, Lanarkshire; J. L. Duncan, Edinburgh; N. F. M'Hardy, Scotland; and D. Sutherland, Strathspey—equal; 78. J. M. Dupont, Bedford; 79. M. W. Robertson, Edinburgh; J. S. Stewart, Scotland; and H. S. Wareham, Guildford—equal; 82. J. W. Duffus, Edinburgh; R. M. Grant, Inverness; E. W. Lewis, Madras; and T. A. Smyth, Ireland—equal; 86. W. A. Duncan, Edinburgh; and E. T. Potts, Harrogate—equal; 88. W. Paterson, Peebles; 89. T. G. B. Dodds, Paris; A. F. G. Masson, Mauritius; and T. L. Thomson, London—equal; 92. R. V. C. Ash, Natal; W. J. Crow, Edinburgh; and C. Douglas, Lockerbie—equal; 95. W. Brown, Scotland; P. V. Langmore, Australia; L. T. M'Lintock, Salop; H. K. M'Donald, Sutherlandshire; T. D. S. M'Kenzie, New Zealand; and G. Pereira, Trinidad—equal.

Unavoidably absent from one Examination :—

Second-Class Honours.—W. M'Dougall, Morayshire; E. S. Brett, Yorkshire; D. E. S. Park, England; H. G. Pesel, Huddersfield.

JUNIOR DIVISION.

First-Class Honours.—1. S. A. Ellerbek, Denmark; 2. A. B. Ross, M.A., Scotland; 3. R. E. Russell, Cape Town; and B. P. Watson, Largo—equal (*Medallists*); 5. S. C. Ellison, Co. Louth; and C. J. Shaw, Perth—equal; 7. P. Mathews, England; 8. F. J. Dawson, India; 9. C. M. Campbell, Edinburgh; 10. A. M. Sharp, M.A., Galashiels; 11. S. Gilford, Surrey; and J. Lormie, East Lothian—equal; 13. J. Dunlop, Lanark; and G. M'Farland, New Zealand—equal; 15. A. W. M. Harvey, Nova Scotia; 16. C. H. Bosenberg, Cape Colony; J. P. Grant, Broughty Ferry; and S. A. K. Wilson, U.S.A.—equal; 19. B. Blacklock,

Scotland; and R. C. Low, Edinburgh—equal; 21. J. Kirkwood, Edinburgh; 22. T. M. Cuthbert, British Honduras; 23. H. Herd, Leith.

SECOND-CLASS HONOURS. 24. T. B. Hamilton, Melrose; 25. W. Lilico, Ireland; T. Mill, New Zealand; and W. A. Robinson, New Zealand—equal; 28. A. N. Fell, New Zealand; and W. H. Swaffield, England—equal; 30. D. R. MacGregor, Dunfermline; 31. T. W. E. Ross, London; 32. D. M. Callander, Scotland, 33. E. L. Meynell, India; 34. E. A. Braine, Montrose; and J. H. Montgomery, Ireland—equal; 36. J. P. Kennedy, Ireland; D. Munro, Herts; D. N. W. Murray, New Zealand; and T. H. Osler, Cape Colony—equal; 40. M. Ritchie, Edinburgh; 41. R. D. Brown, Scotland; 42. R. G. Archibald, India; 43. J. M. Johnson, Scotland; and J. Weir, Ireland—equal; 45. A. M. Caverhill, Scotland; H. H. Robarts, England; and J. S. Sewell, Hexham—equal; 48. J. S. Elliot, Ireland; 49. Dwarka Prasad Goil, India; D. J. Haumann, Cape Colony; and D. Lorimer, Scotland—equal; 52. A. Brownlee, Fauldhouse; and T. S. B. Fletcher, England—equal; 54. W. Bennett, Ireland; 55. J. Fairbairn, Brit. Guiana; M. Holmes, Scotland; R. C. Irvine, Tasmania; and H. Kerr, London—equal; 59. R. G. Adams, New Zealand; and H. Harding, England—equal; 61. G. B. Brand, Bathgate; J. H. Conolly, Ireland; J. G. M'Caughey, Ireland; and R. P. M'Neil, Stranraer—equal; 65. A. W. B. Loudon, Scotland; J. M'M. Marshall, Kirkcudbright; C. O'Flaherty, England; and J. Wallace, Lanark—equal.

Unavoidably absent from one Examination:—

SECOND-CLASS HONOURS.—A. Rose, Nairn.

PRACTICAL PHYSIOLOGY.

SECOND-CLASS HONOURS.—D. Munro, Herts; C. O'Flaherty, England.

E. WACE CARLIER, B.Sc., M.D., pro *Professor*.

MATERIA MEDICA.

FIRST-CLASS HONOURS. 1. Caleb W. Saleeby, Sussex; 2. J. Hally Meikle, Argyleshire; 3. James Halliday, Dumfries; and William H. Prentice, Edinburgh—equal (*Medallists*); 5. T. Brown Shaw, Ireland; 6. George C. Burgess, Aberdeen; and Andrew C. Keay, Scotland—equal; 8. John M'Kenzie, Edinburgh; Peter Murray, M.A., Morayshire; Henry L. Spark, Forfar; and James Woods, Belfast—equal.

SECOND-CLASS HONOURS. — 12. Andrew Hunter, Scotland; and Arthur H. Reid, Trinidad—equal; 14. Ernest A. Walker, Forfarshire; Robert T. Baillie, Brechin; James Brownlee, Scotland; George M'Farland, New Zealand; and Allen G. Waugh, Avonbridge—equal; 19. Stephen Garvin, Ireland; William Lee, England; and William Macdougall, Morayshire—equal; 22. Richard

James Bradley, India; and David C. Henry, Creetown—equal; 24. William H. Dickinson, England; and W. E. Carnegie Dickson, Edinburgh—equal; 26. P. F. M'Farlan, Dumfriesshire; Alfred C. Peterson, Australia; and T. Beauchamp Williams, Wales—equal; 29. E. Elmslie Brown, Scotland; Robert W. Buchanan, Scotland; Edward Calder, Berwickshire; John R. Edward, Musselburgh; Robert A. J. Harper, Mid-Lothian; Morton W. Smart, Edinburgh; Herbert P. Thompson, Lincolnshire; and Paul Telles, Trinidad—equal; 37. Charles Coley Choyce, New Zealand; G. Robertson Mill, Arbroath; George S. Murray, Bo'ness; and Sydney George Peill, Madagascar—equal; 41. Fred E. Wilson, Scotland; 42. George C. I. Robertson, Aberdeen; John A. L. Wallace, Turriff; and A. Ransome Wallis, Epsom—equal; 45. Roderick Grant, Inverness; and James G. M'Bride, Edinburgh—equal; 47. Robert Ash, Natal; Alfred Brown, Scotland; Arthur L. Gurney, Jersey; and William Mair, Minnesota—equal; 51. James Price Kennedy, Ireland; and William Paterson, Peebles—equal; 53. Robert Edward Collins, India; William Hamilton, Ireland; Charles Howe, Edinburgh; and Henry St J. Randell, Cape Colony—equal; 57. D. Macrae Aitken, Singapore; William H. Meyer, British Guiana; and Edward Tyrell, Scotland—equal; 60. Alexander C. Begg, New Zealand; James L. Duncan, Edinburgh; William A. Duncan, Scotland; Arthur H. Firth, Edinburgh; Arthur R. Hallam, Sheffield; Samuel Lyle, Ireland; K. D. C. Macrae, Inverness-shire; and William G. Porter, India—equal; 68. John F. Allan, Strathspey; James Brockett, Lanarkshire; James E. M. Brown, Mauritius; Henry Buist, Dundee; Robert Murray, Scotland; Archibald D. Nimmo, Edinburgh; James H. Pirie, Aberdeenshire; and Michael Robertson, Scotland—equal; 76. E. Seymour Brett, Bridlington; and Andrew E. Hunter, Scotland—equal; 78. Garth S. Blandy, Woolwich; John W. Duffus, Edinburgh; Percy V. Langmore, N.S. Wales; William Murray, Aberdeen; W. Scott Patton, India; and George C. Strathairn, Scotland—equal.

The following gentlemen, who were unavoidably absent from one Examination, obtained over 50 per cent. in two Examinations:—

A. R. Johnstone, Scotland; J. N. Karma, India; E. W. Lewis, Madras; D. A. Ogilvie, Scotland; and D. A. Stewart, London.

PRACTICAL MATERIA MEDICA.

SECOND-CLASS HONOURS.—1. Rupert A. C. Rigby, Ceylon; 2. A. N. Bond, India.

W. C. SILLAR, M.B., C.M., B.Sc., pro *Professor*.

PATHOLOGY.

SENIOR DIVISION.

SECOND-CLASS HONOURS.—A. D. Nimmo, Edinburgh.

JUNIOR DIVISION.

FIRST-CLASS HONOURS.—1. Robert A. Ross, Cape Colony; 2. George A. Davidson, Wigtownshire; 3. D. C. L. Fitzwilliams, Wales; 4. J. Brownlee Milne, Montrose (*Medallists*); 5. W. E. Frost, Ireland; and Norman S. Wells, Burma—equal; 7. H. J. Hoile, Scotland; and Garnet Wright, Whitehaven—equal; 9. Matthew A. Swan, Scotland; 10. Arthur A. Martin, New Zealand; and G. Scott-Carmichael, Edinburgh—equal; 12. O. Charnock Bradley, Lancashire; James Geikie, Perth; James G. S. Jamieson, Ayr; and William S. Scott, Selkirk—equal.

SECOND-CLASS HONOURS.—16. Norman Patterson, Scotland; S. Ramsay Sibbald, Scotland; A. Murray Wood, Leith—equal; 19. John Craig, Edinburgh; Ernest Ewart, Moffat; W. Girdwood, S. Africa; and Henry J. M'Lean, New Zealand—equal; 23. G. H. Hanna, Jamaica; D. Heron, Ireland; and J. Gordon M'Dougall, Montrose—equal; 26. George F. Buist, Scotland; P. S. Haldane, Bridge of Allan; R. G. Leach, England; and H. D. Shepherd, Wigan—equal; 30. James M. L. Brown, M.A., Ayr; Edward B. Jamieson, Shetland; H. C. Nixon, England; John Pender, Dumfriesshire; and J. F. Selkirk, Aberdeen—equal; 35. Simon A. Ballantyne, Scotland; Francis K. Kerr, Leith; T. Grainger-Stewart, Edinburgh; and Alexander Trotter, Scotland—equal; 39. John H. Bell, Scotland; S. M. de Kock, Cape Colony; A. C. N. M'Hattie, West Indies; Charles B. Snow, New Zealand; and J. H. Thornley, England—equal; 44. Alexander Frew, Scotland; David J. Roberts, Wales; and William Wallace, Berwick—equal; 47. Angus M'Nab, New Zealand; James Munro, Dornoch; H. Mason, England; T. S. Shepherd, Wigan; and G. Reynolds Turner, England—equal; 52. William P. Cormack, Tain; Andrew Fleming, Edinburgh; Geo. W. P. Maitland, India; J. M. A. Macmillan, Edinburgh; James C. Parker, Alloa; Samuel Rattray, Edinburgh; George B. Speirs, Cumberland; and Fred. D. Simpson, Bathgate—equal; 61. A. Bryden, Scotland; Fred. Hardie, Kirkcaldy; Lionel J. Hood, Australia; Langworthy Lawrie, Worcester; Arthur D. Spence, Scotland; Arthur W. Wilson, England; and A. Gordon Watson, England—equal; 67. Thomas H. W. Alexander, Perth; Herbert Harris, England; and J. C. Zuidneer, Cape Colony—equal; 70. Robert Affleck, Galloway; W. L. G. Anderson, Scotland; D. MacLeod, Scotland; and J. Miskelly, Ireland—equal; 74. R. A. Cameron, New Zealand; T. A. Davies, Wales; William Eadie, Cumberland; C. Balfour Paul, Scotland; and Tasman J. G. Wilson, Tasmania—equal; 79. John L. Green, Scotland; F. C. Matthew, Corstorphine; and John Ross, Scotland—equal; 82. J. D. Anderson, ————————; Ewen Cameron, England; George W. Guthrie, Liberton; Dundas S. MacKnight, Whitburn; John B. Primmer.

Dunfermline; and G. A. P. Ross, Dingwall—equal; 88. Charles H. Allen, England; Malcolm Campbell, Edinburgh; Y. Fukuda, Japan; Norman E. Harding, England; J. Crawford Kennedy, Wales; L. C. Peel-Ritchie, Edinburgh; and William Sloss, Australia—equal; 95. T. G. S. Leary, Ireland; Alex. J. Mackenzie, Inverness; and C. E. Southon, India—equal; 98. G. H. Lewis, Wales; and Percy C. Rayner, England—equal; 100. John P. Douglas, Scotland; R. Sidney Ellis, India; James C. Gilchrist, Scotland; William M'Lachlan, Scotland; George L. Thompson, Mauritius; and J. H. Wrightson, Carnforth—equal; 106. K. Chapel, Arbroath; J. G. MacKenna, Dumfries; J. Herbert M'Kee, Belfast; J. Keith Robertson, Greenock; G. Duncan Whyte, London; and Alexander Williamson, Haddington—equal; 112. C. Percival Strong, India; 113. L. P. Brassey, England; and Francis F. C. Jagger, England—equal; 115. Alex. J. Baird, Scotland; G. B. Butt, India; A. M. Malcolmson, Scotland; R. M'Clelland, Ireland; R. Rutherford, Edinburgh; and R. A. Savage, Lagos—equal.

Absent from one examination through illness:—

First-Class Honours.—A. Branfoot Black, Madras.

Second-Class Honours.—F. M. Wigg, Australia; H. E. Arbuckle, Natal; A. C. Lennie, Scotland; J. S. Enslin, South Africa; Kenmure Melville; and J. Halley Meikle, Argyll—equal; H. Crichton Miller, M.A., Genoa.

Charles Fraser, Inverness, was absent from two examinations through illness. He obtained 72 per cent. in the first examination.

PRACTICAL PATHOLOGY.

First-Class Honours.—1. J. G. Munro, Scotland (*Medallist*); 2. Angus M'Nab, New Zealand; 3. G. H. Hanna, Jamaica; 4. J. G. M'Dougall, Montrose, and John Ross, Scotland—equal.

Second-Class Honours.—6. Charles Fraser, Inverness; 7. R. Sidney Ellis, India; 8. J. L. Green, Scotland, and James Miskelly, Ireland—equal; 10. D. N. Macleod, Scotland; 11. P. Pattison, Scotland; 12. L. Bruce, Brechin; and Owen L. Rhys, Wales—equal.

R. M'Clelland, Ireland, obtained 58 per cent. in two examinations.

W. S. GREENFIELD, M.D., *Professor.*

PRACTICE OF PHYSIC.

SENIOR DIVISION.

First-Class Honours.—1. John Jeffrey, Scotland; 2. E. Archer Brown, Cape Colony, and James Miller, B.Sc., Scotland—equal (*Medallists*); 4. D. A. Callender, Edinburgh; and R. A. M. Rowe, M.A., Scotland—equal; 6. W. J. Barclay, New Zealand; D. Ewart, New Zealand; R. F. Jardin, British Guiana—equal;

9. G. Lyon, Scotland; 10. F. J. Gray, W. J. Jones, Wales; and M. Mackelvie, Campbeltown—equal; 13. Ivie Aird, Scotland; J. D. Comrie, Scotland; J. W. Mathewson, Dunfermline; H. M. Mackenzie, Scotland; and T. M. Wedderburn—equal; 18. A. Goldie, Jamaica; H. T. Holland, Cornhill on-Tweed; J. G. Jack, Edinburgh; J. M. Macdonald, Scotland; W. M. Paul, Scotland; and S. Simpson, Orkney—equal; 24. D. B. King, Scotland; J. M. Reid, Scotland; W. J. Stuart, Scotland; and A. S. Whytock, Scotland—equal; 28. W. Ewart, New Zealand; S. E. Johnston, Scotland; T. C. Mackenzie, China; L. Macpherson, Edinburgh; and R. G. Thomson, Fifeshire—equal; 33. P. J. Boddington, England; J. F. Martin, Ireland; H. A. D. Moore, Singapore; G. Mackie, Montrose; and P. A. Maclagan, Scotland—equal; 38. B. J. Courtney, England; Y. A. Djedjizian, Asia Minor; J. Fullerton, Scotland; J. H. Gordon, Scotland; W. Purves, Scotland; and W. R. E. Williams, Wales—equal; 44. R. R. Fasson, Scotland; G. G. Hay, Abernethy; H. Overton Hobson, England; A. G. Martin, Ireland; J. Masson, Edinburgh; J. M'Gregor; W. M. Mackay; J. Orr, Scotland; A. S. M. Peebles, Scotland; and W. G. Williams, Wales—equal; 54. J. A. Balck, Germany; T. M. Buist, Scotland; A. S. Frank, England; T. B. Gornall, Preston; Dunbar Hughes, Grenada, West Indies; J. G. Mitchell, Scotland; A. Preston, Yorkshire, A. Tweedie, Haddingtonshire; N. D. Walker, London; and A. Whittome, England—equal.

SECOND CLASS HONOURS.—64. M. Carthew, South America; 65. H. G. Carlisle, England; and W. Reid, Montrose—equal; 67. W. J. M'Farlan, Dumfriesshire; H. G. P. Raeburn, Scotland; T. E. Richards, Wales; J. M. Ross, Scotland; A. B. Shed, Scotland; and H. D. Wilson, Australia—equal; 73. G. D. Laing, Northumberland; 74. R. Bruce, Edinburgh; G. H. Menzies, Scotland; and Thos. Rogerson—equal; 77. J. Alcindor, Trinidad; A. R. Fordyce, Scotland; and H. Faulkner, Pau, France—equal; 80. D. Ferguson, Richmond; A. C. Neethling, Cape Colony; and H. B. Sproat, Tobermory—equal; 83. S. L. Dawkins, South Australia; Thomson Henderson, Islay; E. A. Loch, India; and J. Miller, Canary Isles—equal; 87. J. Anderson, Scotland; D. Fenton, Forfarshire; C. H. G. Gostwyck, Scotland; P. W. Hampton, Isle of Man; and R. N. Pringle, Cape Colony—equal; 92. H. Baird, Scotland; G. Brogden, England; E. G. Ford, York; and J. Husband, Scotland—equal; 96. R. J. Asbury, England; W. D. S. Harrison, England; and D. Robertson, Rothesay—equal; 99. Somerton Clark, Burgess Hill, near Brighton; G. H. Stevens, Scotland; and P. D. Whiriskey, Ireland—equal; 102. B. Stracey, Scotland; 103. S. C. Pritchard, England; and C. E. Smith, New Zealand—equal; 105. W. Macniven, Scotland; and T. P. Oates, Cape Colony—equal; 107. W. E. Herberts, New Zealand; and M. M. Meikle, Jamaica—

equal; 109. F. M. Parry, India; 110. R. N. de Gruchy, Jersey; J. W. Kerr, Scotland; and R. A. Macneil, Scotland—equal; 113. G. J. R. Carruthers, Scotland; and W. C. Spooner, England—equal; 115. T. S. Lessing, Cape Colony; 116. S. H. Morris, England; and J. Thornhill, Ireland—equal; 118. C. Ritter, Cape Colony; and T. B. H. Scott, Ireland—equal.

The following, who were absent from one examination, are arranged in the order of merit:—H. E. Arbuckle, Natal; P. W. M. Macdonald, New Zealand; H. W. Boucham, G. Haddow, Scotland.

JUNIOR DIVISION.

First-Class Honours.—1. J. H. Bell, Scotland; 2. P. S. Haldane, Scotland; 3. G. A. Davidson, Wigtownshire; and Arthur A. Martin, New Zealand (*Medallists*)—equal; 5. T. Grainger Stewart, Edinburgh; Angus Whyte, Easdale; G. Scott Carmichael, Scotland; and S. A. Ballantyne, Scotland—equal; 9. J. M. L. Brown, Scotland; 10. J. G. Macdougall, Scotland; 11. J. B. Primmer, Scotland; 12. Y. Fukuda, Japan; and R. Affleck, Scotland—equal; 14. N. G. Harding, A. Frew, Ayrshire; E. Ewart, Moffat; J. Craig, Edinburgh; and O. C. Bradley, England—equal; 19. J. Munro, Scotland; J. G. S. Jamieson, Ayr; G. H. Hanna, Jamaica; and T. H. W. Alexander, Scotland—equal; 23. C. B. Snow, New Zealand; and H. J. Hoile, Scotland—equal; 25. N. Wells, Burmah; L. C. Peel Ritchie, Scotland; J. Pender, Scotland; C. B. Paul, Scotland; J. C. Parker, Scotland; and J. P. Campbell, Aberdeenshire—equal.

Second-Class Honours.—31. G. Wright, Cumberland; F. D. Simpson, Scotland; F. K. Kerr, Leith; J. B. Dunlop, Bradford: and W. P. Cormack, Tain—equal; 36. N. Paterson, Scotland; D. S. Macknight, Whitburn; and R. G. Leach, Rochdale—equal; 39. J. G. Mackenna, Scotland; 40. A. M. Wood, Leith; R. Thomson, Ireland; H. Oswald Smith, Scotland; R. A. Ross, South Africa; K. D. Melville, India; and A. P. Cunningham, Scotland—equal; 46. H. Harris, England; 47. E. B. Jamieson, Shetland; 48. G. D. Whyte, London; J. C. Kennedy, Wales; and D. Heron, Ireland—equal; 51. J. F. Selkirk, Aberdeen; and A. C. Lennie, Scotland—equal; 53. W. Wallace, Berwick-on-Tweed; and J. B. Milne, Scotland—equal; 55. J. Jamieson, Scotland; J. Geikie, Scotland; and Malcolm Campbell, Scotland—equal; 58. J. K. A. Robertson, Greenock; 59. J. M. Benson, England; 60. S. R. Sibbald, Scotland; and S. M. D. Campbell, Ireland—equal; 62. G. B. Spiers, England; S. Rattray, Scotland; R. Hamilton, England; and W. L. G. Anderson, Scotland—equal; 66. H. M. Roberts, Wales; K. Chapel, Scotland; and T. G. S. Leary, Ireland—equal; 69. C. P. Strong; O. L. Rhys, Wales; G. H. Lewis, Wales; G. W. Guthrie, Scotland; and B. G. Forman,

Scotland—equal; 74. A. D. Spence, Forfarshire; H. D. Shepherd, England; W. C. Ross, Scotland; A. F. Mackay, Scotland; and Jas. Miskelly, Ireland—equal; 79. J. H. M'Kee; G. L. Thomson, Mauritius; and J. Duncan, Kinross -equal; 82. J. H. Wrightson, England; R. Rutherford, Edinburgh; and J. R. Prytherch, Wales —equal; 85. A. J. Williamson, Haddington; J. L. Rentoul, Ireland; J. P. Douglas, Scotland; and J. M. Barrack, Falkland —equal; 89. K. L. Teng, Strait Settlements; L. P. Brassey, Chester; and B. H. S. Aylward, England—equal; 92. W. Sloss, Australia; R. Sidney Ellis, India; and L. Bruce, Brechin—equal; 95. D. M. Macleod, Scotland; W. Macfarlane, Scotland; L. A. Holcroft, England; and F. Hardie, Scotland—equal.

The following, who were absent from one Examination, are arranged in the order of merit:—A. B. Black, India; J. S. Eurlin, South Africa; J. Morrison, Ireland.

T. GRAINGER STEWART, K.B., M.D., LL.D., *Professor.*

MIDWIFERY.

First-Class Honours.—1. W. J. Barclay, New Zealand; and F. A. F. Barnardo, India—equal; 3. George Mackie, Montrose; 4. George Lyon, Scotland; and R. M. Rowe, M.A., Scotland—equal (*Medallists*); 6. D. Ewart, New Zealand; 7. J. Orr, Wigtownshire; 8. T. A. Price, Queensland; 9. Y. A. Djedjzian, Asia Minor; J. H. Gordon, Scotland; and W. J. Stuart, Scotland—equal; 12. H. T. Holland, Cornhill-on-Tweed; 13. J. D. Comrie, Scotland; and T. S. A. Orr, Scotland—equal; 15. R. R. Fasson, Scotland; E. G. D. Menzies, Scotland; and F. D. Simpson, Scotland—equal; 18. G. G. Hay, Abernethy; 19. J. G. S. Jamieson, Ayr; W. S. Scott, Bonnyrigg; and H. D. Wilson, Australia —equal; 22. T. C. Mackenzie, China; J. M. A. M'Millan, Edinburgh; G. Masson, Scotland; and A. Preston, Yorkshire—equal; 26. J. M'Gregor, Crieff; J. Munro, Scotland; J. M. Reid, Scotland; W. Reid, M.A., Montrose; W. R. E. Williams, Wales; and Garnet Wright, Whitehaven—equal; 32. J. Husband, Scotland; W. J. Jones, Wales; and J. Luckhoff, Cape Colony—equal; 35. J. Fullarton, Glasgow; G. C. M'Leavy, Ireland; A. G. Martin, Ireland; James Miller, Canary Isles; J. A. Murray, Scotland; R. G. Thomson, Scotland; A. S. M. Peebles, Scotland; J. B. Primmer, Dunfermline; B. J. Courtney, Altrincham; and William Park, Orkney—equal.

Second-Class Honours.—45. S. A. Ballantyne, Scotland; and W. J. Collinson, Guernsey—equal; 47. E. G. Ford, England; and Sutherland Simpson, Orkney—equal; 49. W. F. D. Bromley, England; and W. A. Murray, Cape Colony—equal; 51. A. Frew, Scotland; B. K. Goldsmith, Isle of Man; A. H. Griffith, England; J. G. M'Dougall, Montrose; T. E. Richards, Wales; and C. B. Snow, New Zealand—equal; 57. W. Ewart, New Zealand;

H. A. D. Moore, Singapore; and J. Pender, Dumfriesshire—equal; 60. Harvey Baird, Perth; 61. L. Bruce, Brechin; J. F. Geekie, Scotland; A. C. N. M'Hattie, West Indies; A. B. Shed, Scotland; H. D. Shepherd, Wigan; and L. M. Wedderburn, Scotland—equal; 67. D. S. M'Knight, Whitburn; 68. A. R. Fordyce, Scotland; 69. Angus Whyde, Easdale; 70. J. G. Bell, Australia; F. P. Oates, Cape Colony; S. C. Pritchard, England; and F. M. Wigg, Australia—equal; 74. I. Aird, Scotland; H. A. H. Gilmer, New Zealand; and A. C. Neethling, Cape Colony—equal; 77. S. R. Sibbald, Scotland; J. H. Thornley, England; J. M. L. Brown, Scotland; and L. Laurie, England—equal; 81. W. J. Macfarlan, Scotland; G. H. Menzies, Scotland; B. Stracey, Scotland; and A. Tweedie, Scotland—equal; 85. L. J. Hood, Australia; E. A. Loch, India; and W. G. Williams, Wales—equal; 88. R. Affleck, Galloway; A. P. L. Brown, England; Y. Fukuda, Japan; and P. D. Whiriskey, Ireland—equal; 92. J. C. Parker, Alloa; 93. R. M. Pringle, Cape Colony; and N. S. Wells, Burmah—equal; 95. A. Fleming, Edinburgh; J. H. M'Kee, Ireland; and N. D. Walker, London—equal; 98. J. C. Carr, England; and D. R. Evans, Wales—equal; 100. L. S. Lessing, Cape Colony; A. D. Spence, Scotland; J. Thompson, Wigtownshire; and A. Trotter, Perth—equal; 104. R. G. Leach, England; and T. Grainger Stewart, Scotland—equal; 106. J. M. Buist, Scotland; M. Campbell, Scotland; J. P. Douglas, Scotland; J. Duncan, Scotland; A. F. Mackay, Scotland; J. G. M'Kenna, Scotland; A. J. Mackenzie, Inverness; J. F. Selkirk, Scotland; M. A. Swan, Scotland; and W. W. Thom, Scotland—equal.

PRESENT AT TWO EXAMINATIONS ONLY (ARRANGED IN ORDER OF MERIT).—J. G. Jack, Scotland; O. H. J. Watson, Cape Colony; E. F. Bashford, Cheshire; J. J. Galbraith, Inverness; M. Ahmed, India; A. B. Black, India; H. C. Keun, Singapore; J. C. Kennedy, Wales; P. W. Hampton, Isle of Man.

A. R. SIMPSON, M.D., *Professor.*

SYSTEMATIC SURGERY.

SENIORS.

FIRST-CLASS HONOURS.—1. George Lyon, Scotland; 2. Geo. Mackie, Montrose (*Medallists*); 3. William J. Stuart, Edinburgh; 4. John H. Gordon, Scotland; 5. T. C. Mackenzie, China; 6. John D. Comrie, Scotland; 7. Arthur Preston, Yorkshire; 8. A. K. Traill, India; 9. A. B. Shed, Foulden; 10. Sutherland Simpson, Orkney; 11. T. B. Gornall, Preston; and James M. Reid, Edinburgh—equal; 13. T. S. A. Orr, Wigtownshire; and R. M. Rowe, Scotland—equal; 15. Fred. G. Ralston, Glasgow; and A. G. Martin, Ireland—equal.

SECOND-CLASS HONOURS.—17. George D. Laing, Northumberland; 18. J. L. Louis, Mauritius; 19. W. J. M'Farlan, Scotland; 20.

F. A. F. Barnardo, India, and R. F. Jardin, British Guiana—equal; 22. Y. A. Djedjizian, Asia Minor; W. M. Mackay, Durham; and T. P. Oates, Cape Colony—equal; 25. F. J. Gray, Scotland; 26. J. W. Mathewson, Dunfermline; 27. J. R. Munro, Norwich; 28. J. K. Hermon, Montrose; 29. R. G. Thomson, Fifeshire; 30. G. H. Menzies, Scotland; W. W. Thom, Blairgowrie; and H. D. Wilson, Australia—equal; 33. John M'Gregor, Crieff; 34. E. G. D. Menzies, Innerleithen; 35. A. E. Goldie, Jamaica; 36. S. L. Dawkins, South Australia; 37. P. N. M. Macdonald, New Zealand; 38. R. R. Fasson, Scotland, and J. A. Murray, Scotland—equal; 40. William Reid, Montrose, and Angus Whyte, Easdale—equal; 42. P. D. Whiriskey, Ireland; 43. Ivie Aird, Lockerbie, and J. J. Galbraith, Inverness—equal; 45. P. A. Maclagan, Edinburgh; 46. Alex. R. Fordyce, Scotland; 47. J. Wishart Kerr, Fife; 48. Evariste Laval, Scotland.

JUNIORS.

First-Class Honours.—1. Andrew B. Ross, Scotland; 2. Sidney Gilford, Surrey; 3. Ben P. Watson, Largo (*Medallists*); 4. D. R. Macgregor, Dunfermline, and S. A. K. Wilson, New Jersey—equal; 6. S. A. Ellerbek, Denmark; 7. M. Holmes, Scotland; 8. C. H. Bösenberg, Cape Colony; 9. D. N. W. Murray, New Zealand, and Henry H. Robarts, England—equal; 11. Wilbert Goodchild, Westmoreland; 12. J. S. Elliot, New Zealand; 13. R. C. Low, Edinburgh; 14. Henry Herd, Leith; 15. J. P. Grant, Broughty Ferry; Wm. Lilico, Ireland; and C. O'Flaherty, England—equal; 18. R. E. Russell, Cape Town; 19. Chas. Nelson, Edinburgh; 20. R. P. M'Neil, Stranraer; 21. E. L. Meynell, India; 22. Wm. Bennett, Ireland; 23. John Weir, Ireland; 24. T. F. Cavanagh, Ireland; T. B. Hamilton, Melrose; and H. M. Stumbles, England—equal; 27. J. Arthur, England; 28. Alex. P. Cunningham, Campbeltown.

Second-Class Honours.—29. A. W. M. Harvey, Nova Scotia; 30. R. Dods Brown, Scotland; 31. J. Dommisse, Cape Colony; 32. William Young, Airdrie; 33. J. R. Bosman, Cape Colony; 34. John Dunlop, Lanark, and Paul Mathews, Carlisle—equal; 36. A. N. Fell, New Zealand, and D. Heron, Ireland—equal; 38. Andrew Grant, Ross-shire; 39. Duncan Lorimer, Scotland, and T. W. E. Ross, England—equal; 41. E. A. Braine, Montrose; 42. G. B. Brand, Bathgate; 43. H. Harding, Liverpool, and C. J. Shaw, Perthshire—equal; 45. John W. Cathles, Edinburgh; F. J. Dawson, India; Abraham Leach, Oldham; and T. H. Osler, Cape Colony—equal; 49. Andrew J. Rowan, Cape Colony, and E. S. Sharpe, Ireland—equal; 51. Lewis Anderson, Jamaica; C. M. Campbell, Edinburgh; Alexander Rose, Nairn; and A. M. Sharp, M.A., Galashiels—equal; 55. Archibald Brownlie, Fauldhouse, and Arthur H. M'Shine, Trinidad—equal; 57. G.

Henderson, Dunfermline, and John K. Matheson, Scotland—equal; 59. E. W. Smyth, Victoria; 60. T. H. Mackinnon, Aldershot; 61. Alex. K. Baxter, Leith; W. F. Smeall, Jedburgh; and H. O. Smith, North Berwick—equal; 64. T. M. Cuthbert, British Honduras; 65. A. M. Moll, Orange Free State; 66. R. J. Mayberry, Ireland; 67. B. Blacklock, Scotland; 68. J. M. Johnstone, Muirkirk; A. F. H. Rabagliati, England; and Walter R. Reid, Essex—equal; 71. John Wallace, Lanark; 72. J. G. Briggs, India, and William Hume, Australia—equal; 74. H. S. Gaskell, England; R. D. Kidd, Natal; and A. B. dos Remedios, India—equal; 77. Henry Curwen, Scotland, and Jas. S. Sewell, Hexham—equal; 79. J. Fairbairn, British Guiana; 80. Austin M. Caverhill, Scotland; 81. R. G. Adams, New Zealand, and Percy J. Hay, Switzerland—equal; 83. G. Cranston Anderson, America, and John G. M'Caughey, Ireland—equal; 85. A. E. Morton, Edinburgh, and P. Vickers, Jamaica—equal; 87. D. Mackinnon, Edinburgh; 88. Henry Beveridge, Edinburgh; 89. George Harrison, England; 90. G. D. Sloan, London; 91. Henry J. Dunbar, Dunfermline; 92. C. von Mengerhausen, Cape Colony, and John Politachi, Manchester—equal; 94. W. E. Knight, Dublin, and W. E. Marshall, Perth—equal; 96. A. W. B. Loudon, Scotland; 97. R. G. Archibald, India, and M. Davies, Wales—equal; 99. A. B. Leakey, England; J. C. Loudon, Trinidad; and M. Sinclair, Burma—equal; 102. Harold Kerr, London; J. J. N. Pierre, Trinidad, and E. M. Reece, England—equal; 105. A. F. Narlborough, Germany; 106. H. H. Bullmore, Australia; R. B. Hole, Scotland; and V. Langmore, Australia—equal.

PRACTICAL SURGERY.

SENIORS.

HONOURS.—William J. Stuart, M.A., Edinburgh (*Medallist*); Fred. G. Ralston, Glasgow (*Aces.*); James M. Reid, Edinburgh; John H. Gordon, Scotland; George Lyon, Scotland; A. B. Shed, Foulden; Sutherland Simpson, Orkney; John M'Gregor, Crieff; George Mackie, Montrose; A. K. Traill, India; T. B. Gornall, Preston; R. G. Thomson, Fifeshire; Y. A. Djedjizian, Asia Minor; T. S. A. Orr, Wigtownshire; John D. Comrie, Scotland; W. M. Mackay, Durham; T. C. Mackenzie, China; J. W. Mathewson, Dunfermline; Arthur Preston, Yorkshire; P. D. Whiriskey, Ireland.

HAROLD J. STILES, M.B., *Demonstrator.*

JUNIORS.

HONOURS.—D. R. MacGregor, Dunfermline (*Medallist*); Ben P. Watson, Largo (*Aces.*); Sidney Gilford, Surrey; Henry H. Robarts, England; S. A. K. Wilson, New Jersey; Alexander K. Baxter, Leith; C. H. Bosenberg, Cape Colony; John W. Cathles,

Edinburgh; J. Dommisse, Cape Colony; S. A. Ellerbek, Denmark; J. P. Grant, Broughty Ferry; M. Holmes, Scotland; William Lilico, Ireland; Duncan Lorimer, Scotland; R. C. Low, Edinburgh; D. N. W. Murray, New Zealand; Andrew B. Ross, Scotland; E. S. Sharpe, Ireland; William Young, Airdrie; C. M. Campbell, Edinburgh; J. S. Elliot, New Zealand; Wilber-Goodchild, Westmoreland; E. L. Meynell, India; C. J. Shaw, Perthshire; W. F. Smeall, Jedburgh; John Wier, Ireland; Archibald Brownlie, Fauldhouse; J. G. Briggs, India; T. F. Cavanagh, Ireland; T. B. Hamilton, Melrose; George Harrison, England; A. W. N. Harvey, Nova Scotia; Charles Nelson, Edinburgh; T. H. Osler, Cape Colony; C. O'Flaherty, England; E. M. Reece, England; Andrew J. Rowan, Cape Colony; R. E. Russell, Cape Town.

JAMES GRAY, M.A., M.B., *Demonstrator.*
JOHN CHIENE, M.D., *Professor.*

DISEASES OF THE LARYNX, EAR AND NOSE.

First-Class Honours.—1. George Thomson (*Prizeman*); 2. W. James Jones; 3. J. Luckhoff.

P. M'BRIDE, M.D., *Lecturer.*

Faculty of Music.

WINTER SESSION, 1898-99.

HARMONY.

Honours Certificate.—1. Katherine H. Fraser, St Andrews (*Medallist*).

Honourable Mention Certificate.—2. Janie Wilson M'Intosh, Edinburgh.

ADVANCED HARMONY.

FIRST SECTION.

Honours Certificate.—1. David Bayne, Edinburgh (*Medallist*) 2. John Peebles Conn, Penicuik (*Medallist*).

Honourable Mention Certificate.—3. Nora F. Anderson, Edinburgh.

SECOND SECTION.

Honours Certificate.—1. John P. Dunn, Edinburgh.

Honourable Mention Certificate.—2. Harry Taylor, Edinburgh; 3. Janet Jeffrey, Edinburgh; 4. Janet Straton M'Ewen, Stonehaven.

COUNTERPOINT.

FIRST SECTION.

HONOURS CERTIFICATE.—1. John Peebles Conn, Penicuik (*Medallist*).

SECOND SECTION.

HONOURS CERTIFICATE.—1. David Bayne, Edinburgh (*Medallist*); 2. John P. Dunn, Edinburgh.

HONOURABLE MENTION CERTIFICATE.—3. Janet Jeffrey, Edinburgh; 4. Harry Taylor, Edinburgh.

HISTORY OF MUSIC.

HONOURS CERTIFICATE.—1. Frank M. Crosbie, Edinburgh (*Medallist*); 2. Janet Jeffrey, Edinburgh.

HONOURABLE MENTION CERTIFICATE.—3. Nora F. Anderson.

MUSICAL ANALYSIS.

HONOURS CERTIFICATE.—1. Evelyn E. G. Dallas, Edinburgh (*Medallist*); 2. John Peebles Conn, Penicuik; 3. James Craig, Edinburgh; 4. Kris Allsopp, Edinburgh.

HONOURABLE MENTION CERTIFICATE.—5. Janet Jeffrey, Edinburgh.

FREDERICK NIECKS, Mus.D., *Professor.*

Preliminary Examination Papers for Degrees in Arts, Science, Law (B.L.), and Music.

ENGLISH.—FIRST PAPER.

SATURDAY, 1*st October* 1898.—9 *to* 11 A.M.

FIVE, *and not more than* FIVE *questions are to be answered. Questions* **1, 2,** *and* **6** *must be answered by all.*

1. Write an essay, from two to three pages long, on one of the following subjects :—

(*a*) The value of colonial possessions.

(*b*) Ghosts.

(*c*) Blood is thicker than water.

2. Paraphrase :—

The Poet to his dead Friend.

When I contemplate all alone
The life that had been thine below,
And fix my thoughts on all the glow
To which thy crescent would have grown ;

I see thee sitting crown'd with good,
A central warmth diffusing bliss
In glance and smile, and clasp and kiss,
On all the branches of thy blood ;

Thy blood, my friend, and partly mine ;
For now the day was drawing on,
When thou should'st link thy life with one
Of mine own house, and boys of thine

Had babbled "Uncle" on my knee
But that remorseless iron hour
Made cypress of her orange flower
Despair of Hope, and earth of thee.

3. Give a *general* analysis of the following passage, and parse the words in italics:—

Nothing so difficult as a beginning
In poesy, unless perhaps the *end*;
For oftentimes when Pegasus seems winning
The race, he sprains a wing, and down we tend,
Like Lucifer when hurl'd from heaven for *sinning*;
Our sin the same, and hard *as* his to *mend*,
Being pride, which leads the mind to soar too far,
Till our own weakness shows us what we are.

4. Give the derivation of any *eight* of the following words:—*examination, school, grail, tutor, quadrangle, huckster, lunch, Tory, prize, bead, pavilion, dumpling.*

Or, Give the doublet of each of the following:—*dyke, beaker, piazza, ship, chariot, extraneous, crypt, moslem, prosecute, surface, castigate, strait.*

5. Define and illustrate *synonym, homonym, elision, double comparative, double plural.*

How many inflections remain in the English verb? Name them.

6. Re-write, so as to correct or improve, the following sentences, giving reasons for any changes you may make:—

(*a*) "After the many heavy lashes that have fallen from your pen, you may justly expect in return all the load that my ink can lay upon your shoulder."

(*b*) "I may tell you that neither the name of husband nor wife have had the least influence in the matter."

(*c*) "Nothing will distract me from finding out the breaker of your window, for which I am sorry."

(*d*) "I am also one of those who cannot well convey in words what I do not exactly see."

SECOND PAPER.

SATURDAY, 1*st October* 1898.—12 NOON *to* 2 P.M.

EIGHT, *and not more than* EIGHT, *questions are to be answered. Of these,* THREE *must be taken from* SECTION A (*and of the three,* 2 *or* 6 *must be one*), THREE *from* SECTION B, *and* TWO *from* SECTION C.

A.

1. Give some account of *three* (*not more*) of the following:—*Westward Ho!*, *The Tale of a Tub*, *English Bards and Scotch Reviewers*, *The Spectator*, *Pendennis*, *The School for Scandal*, *Adam Bede*, *Dr. Jekyll and Mr. Hyde*, *Noctes Ambrosianae*, *Christobel*.

Or, Sketch briefly the history during the eighteenth century *either* of the English novel *or* of Scottish poetry.

2. What are the principal objects of Addison's satire in his essays on women? Illustrate by reference to the prescribed essays.

3. Describe the characters of Sir Roger de Coverley and Will Honeycomb; and illustrate what is meant by Addisonian irony.

4. Explain the terms *essay*, *masque*, *epic*, *novel*, *allegory*, *elegiac*, and name one or two of the chief English examples of each.

5. Write an account of (*a*) The Porteous Riots, *or* (*b*) the story of Prospero.

6. Explain the following with reference to the context:—

(*a*) Ay, sir; and where lies that? if 'twere a kibe,
'Twould put me to my slipper: but I feel not
This deity in my bosom.

(*b*) For neither were ye playing on the steep,
Where your old bards, the famous Druids, lie,
Nor on the shaggy top of Mona high,
Nor yet where Deva spreads her wizard stream.

(*c*) What, though rare, of later age
Ennobled hath the buskin'd stage.

(*d*) That sit upon the nine infolded spheres
And sing to those that hold the vital shears,
And turn the adamantine spindle round.

(*e*) "I wonder," says he, "that Sir Richard Baker has said nothing of her in his Chronicle."

B.

1. Write a short biography of the Earl of Chatham.

2. Write notes on *four* of the following:—Treaty of Utrecht, Riot Act, South Sea Bubble, Wandewash, *The North Briton*, *Letters of Junius*, Bunker's Hill, Reign of Terror, Peace of Amiens, Battle of Navarino, The Chesapeake and Shannon.

3. Write notes on *four* of the following:—Lord Lovat, Dupleix, Admiral Byng, Murray of Broughton, Lord Cornwallis, Edmund Burke, Canning, Sir Robert Peel, Sir John Moor, the Old Pretender.

4. Sketch the history of the Irish Rebellion of 1798.

5. Enumerate the leading events of (*a*) the American War of Independence, *or* (*b*) the Peninsular War.

6. Mention the chief events in the government of Sir Robert Walpole.

C.

1. Name the chief towns on or near the east coast passed on a railway journey between Aberdeen and London, giving some account of their size, their manufactures, and their historical associations.

2. Indicate the position and importance of any *five* of the following:—Herat, Aden, Colombo, Simla, Marseilles, Khiva, Dresden, Manila, Praetoria, Lagos, Port Arthur, Brindisi, Ceuta.

3. Explain the following:—Hinterland, all-British-cable, Zollverein, Trans-Siberian railway, "Reuter."

4. Give some account of the climate and natural resources of Egypt.

FIRST PAPER.

SATURDAY, 1*st April* 1899.—9 *to* 11 *o'clock.*

FIVE, *and not more than* FIVE, *questions are to be answered. Questions* **1, 2,** *and* **6** *must be answered.*

1. Write an essay, from two to three pages long, on one of the following subjects:—

(*a*) *Kenilworth* as history.

(*b*) The conquest of the Soudan.

(*c*) The Arabian Nights.

2. Paraphrase the following:—

Night and Death.

Mysterious Night! when our first parent knew
Thee from report divine, and heard thy name,
Did he not tremble for this lovely frame,
This glorious canopy of light and blue?
Yet 'neath a curtain of translucent dew,
Bathed in the rays of the great setting flame,
Hesperus with the host of heaven came,
And lo! Creation widened in man's view!
Who could have thought such darkness lay concealed
Within thy beams, O Sun? Or who could find,
Whilst fly and leaf and insect stood revealed,
That to such countless orbs thou mad'st us blind?
Why do we, then, shun Death with anxious strife?
If Light can thus deceive, wherefore not Life?

3. Give a *general* analysis of the following passage, and parse the words in italics:—

Her vision *rather* drave from passion's heart
What earthly *soil* it had afore possest;

Since to man's purer unsubstantial part
The brightness of her presence was addrest:
And *such* as mock'd at God, when once they saw
Her heavenly glance, were humbled, and, in awe
Of things unseen, *returned* to praise the *Best.*

4. (*a*) Re-write the following passage, substituting, where practicable, words of foreign for words of native stock, and *vice versâ*:—You wish the freedom of your country. You wish it for yourselves. You strive for it in many ways. Do not then give the hand of fellowship to the worst foes of freedom that the world has ever seen, and do not, I beseech you, bring down a curse upon your cause which no after penitence can ever lift from it.

Or,

(*b*) Derive *eight* of the following words:—*Kindred, mate, mend, cheese, tile, monkey, contrive, chest, plea, fig, furl, paper, slave, dean.*

5. Explain what is meant by the sequence of tenses. State the rules and give examples.

6. Re-write, so as to correct or improve, the following sentences, giving reasons for any changes you may make:—

(*a*) Wallace was not only the creator of a new kind of army, but of a nation—one of the most vigorous nations which has ever played a part in the conflicts of the world.

(*b*) We feel a higher pleasure in contemplating the multitude of our own virtues than those of others.

(*c*) Hitherto and before now neither man or woman or child turned back again to the same path which they have once deserted.

(*d*) Having perceived the silliness of his pretensions these are now disappearing like chaff before the sunshine.

SECOND PAPER.

SATURDAY, 1*st April* 1899.—12 NOON *to* 2 P.M.

EIGHT, *and not more than* EIGHT, *questions are to be answered. Of these,* THREE *must be taken from Section A (and of the* THREE 2 *or* 5 *must be* ONE), THREE *from Section B, and* TWO *from Section C.*

A.

1. Give some account of *two* or *three* (*not more*) of the following :—

(*a*) *Crotchet Castle, Pride and Prejudice, Annals of the Parish, Daniel Deronda, Sohrab and Rustum, The Gentle Shepherd, Adonais, Sesame and Lilies.* *Or,*

(*b*) Matthew Bramble, Balfour of Burley, Major Pendennis, Barbara Grant, Perdita, Sir Guyon, Grisildis, Shylock, Comus.

NOTE.—*The answer to this question must indicate a first-hand acquaintance with the subjects chosen.*

2. Write short notes on any three of the following, and a fuller account of the fourth :—

Brutus, Richard Varney, the Scholar Gipsy, and Pope as in Johnson's *Life.*

3. Discuss (*a*) Johnson's estimate of Pope's poetry ; or (*b*) the chief qualities of Matthew Arnold's poetry as shown in the book prescribed.

4. Give a full account of *one* of the following :—

(*a*) The part played by Queen Elizabeth in *Kenilworth.*

(*b*) Julius Cæsar as the subject of the play.

(*c*) Hermod's journey to Hela's kingdom.

(*d*) Pope in his relations with Swift, Arbuthnot, Bolingbroke, and Warburton.

5. Write brief notes on :—

(*a*) Who questions the Keeper of the Crystal Castle of Light, the Lord of the Green Lion, the Rider of the Red Dragon ?

(*b*) Oh, name him not; let us not break with him,
For he will never follow anything
That other men begin.

(*c*) Of your philosophy you make no use
If you give place to accidental evils.

(*d*) Thou, too, O Thyrsis, on like quest wast bound!
Thou wanderedst with me for a little hour!
Men gave thee nothing: but this happy quest,
If men esteemed thee feeble, gave thee power.

(*e*) Behold the stern, mailed father, staff in hand!
The little fair-haired son, with vacant gaze,
Where no more lights of sense or knowledge are.

(*f*) Atossa, Atticus, the Man of Ross.

B.

1. Sketch the Life of King Alfred.

2. Write notes on *four* of the following:—

Danish Invasions, Norman Conquest of England, Domesday Book, the Crusades, English Kings and the Papacy, Battle of Falkirk, Statutes of Labourers, Battle of Agincourt, Pilgrimage of Grace, Babington's Conspiracy, Conquest of Ireland.

3. Write notes on *four* of the following:—

Saint Augustine of Canterbury, Athelstan, Edward the Confessor, Strongbow, Hubert de Burgh, Edward the First, Sir William Wallace, Joan of Arc, Richard the Third, Cardinal Wolsey, Sir Thomas More, Sir Francis Drake, Regent Moray, Lord Burleigh.

4. How and why did the Reformation in England differ from the Reformation in Scotland?

5. Describe the struggle of England with France from 1339 to 1389.

6. Sketch the history of Scotland from the Battle of Flodden to the Union with England in 1603.

C.

1. Give a general account of the build, river-systems and natural resources of Spain.

2. Describe the district of Scotland immediately south of the Moray Firth ; mention the chief towns and the various industries.

3. Give a general description of Canada, indicating the divisions and chief towns, and remarking upon the trade of the Dominion.

4. Sketch the course of a railway from Cairo to Cape Colony, and explain how such a railway is expected to affect English commerce.

LATIN—Higher Standard.

FIRST PAPER.

Tuesday, 4*th October* 1898.—9 *to* 11 a.m.

I. For Latin Prose :—

The whole camp was almost in open mutiny, all demanding with eagerness to see their commander. Cortes was not slow in appearing ; when, with one voice, soldiers and officers expressed their astonishment and indignation at the orders which they had received. It was unworthy, they cried, of the Castilian courage, to be daunted at the first aspect of danger, and infamous to fly before any enemy appeared. For their parts, they were determined not to relinquish an enterprise that had hitherto been successful, and which tended so visibly to spread the knowledge of true religion, and to advance the glory and interest of their country. Happy under his command, they would follow him with alacrity through every danger, in quest of those settlements and treasures which he had so long held out to their view ; but if he chose rather to return to Cuba, and tamely give up all his hopes of distinction and opulence to an envious rival, they would instantly choose another general to conduct them in that path of glory which he had not spirit to enter.

II.—Grammar.

1. (*a*) Give the chief parts of *fingo, diffido, prodeo, deleo.*

(*b*) Parse the following, and mark the quantity of every syllable: *parcas, ademistis, oritur, exuero.*

2. (*a*) Write a Latin sentence to illustrate the usage of each of the following words, and translate each sentence into English: *quivis, quisquis, quisquam, quando, quamquam.*

(*b*) Explain shortly the use of the prepositions *citra, coram, prae, propter, penes.*

(*c*) Enumerate three principal uses of the Dative Case in Latin, giving an example of each.

(*d*) Distinguish *timeo ut credas, timeo ne credas; vix crederem, vix crediderim; utinam possim, utinam possem.*

(*e*) Express in Latin:—

I am more ashamed of the conqueror than of the conquered.

It matters nothing to you.

He died three days after the city was taken.

He was born fifty years ago at Miletus.

SECOND PAPER.

Tuesday, *4th October* 1898.—12 *to* 2 *o'clock.*

I. Translate:—

(*a*) Odium igitur acerrimum patris in filium ex hoc, opinor, ostenditur, Eruci, quod hunc ruri esse patiebatur. numquid est aliud? "immo vero," inquit, "est; nam istum exheredare in animo habebat." audio: nunc dicis aliquid quod ad rem pertineat; nam illa, opinor, tu quoque concedis levia esse atque inepta: "convivia cum patre non inibat." quippe qui ne in oppidum quidem nisi perraro veniret. "domum suam istum non fere quisquam vocabat." nec mirum, qui neque in urbe viveret neque revocaturus esset. verum haec tu quoque in-

telligis esse nugatoria: illud quod coepimus videamus, quo certius argumentum odii reperiri nullo modo potest: exheredare pater filium cogitabat. mitto quaerere qua de causa: quaero qui scias; tametsi te dicere atque enumerare causas omnes oportebat, et id erat certe accusatoris officium, qui tanti sceleris argueret, explicare omnia vitia atque peccata filii, quibus incensus parens potuerit animum inducere ut naturam ipsam vinceret, ut amorem illum penitus insitum eiceret ex animo, ut denique patrem esse sese oblivisceretur; quod sine magnis huiusce peccatis accidere potuisse non arbitror.

(*b*) [*Achilles at Scyros.*]

Solvuntur laudata cohors repetuntque paterna
limina, ubi in mediae iamdudum sedibus aulae
munera, virgineos visus tractura, locarat
Tydides, signum hospitii pretiumque laboris,
hortaturque legant; nec rex placidissimus arcet.
hinc aliae, quas sexus iners naturaque ducit,
aut teretes thyrsos aut respondentia temptant
tympana, gemmatis aut nectunt tempora limbis.
at ferus Aeacides, radiantem ut cominus orbem
caelatum pugnis saevis et forte rubentem
bellorum maculis, acclinem et conspicit hastam,
infremuit torsitque genas, et fronte relicta
surrexere comae: nusquam mandata parentis,
nusquam occultus amor, totoque in pectore Troia est,
ut leo, materno quum raptus ab ubere mores
accepit, pectique iubas hominemque vereri
edidicit nullasque ruit nisi iussus in iras:
si semel adverso radiavit lumine ferrum,
eiurata fides, domitorque inimicus, in illum
prima fames, timidoque pudet servisse magistro

II. Sentences.

1. The consul led out his troops to see if he could discover the enemy.

2. There is no doubt that, if you ask him, he will give you the money which he owes.

3. I praised the book, not because my friend wrote it, but because I thought it worthy of praise.

4. When we arrived at Tusculum, which is about fourteen miles from the city of Rome, we sent a slave to ask whether the road was safe or not.

5. Would that he had died before committing this crime!

FIRST PAPER.

Tuesday, *4th April* 1899.—9 *to* 11 A.M.

I. For Latin Prose:—

While they were in the midst of these discourses, dispersed in small parties, the tyrant arrived, and having summoned an assembly he congratulated the Syracusans upon their late victory, and promised in a short time to put an end to the war, and deliver them from the enemy. He was going to dismiss the assembly, when Theodorus, one of the most illustrious of the citizens, a person of sense and valour, took upon him to speak and to declare boldly for liberty. We are told, said he, of restoring peace, terminating the war, and of being delivered from the enemy. What signifies such language from Dionysius? Can we consider as peace the wretched state of slavery to which he has reduced us? Have we any enemy more to be dreaded than the tyrant that subverts our liberty, or a war more cruel than that he has made upon us for so many years? Let Imilco conquer, he will content himself with laying a tribute upon us, and leave us the exercise of

our laws, but the tyrant that enslaves us knows no other than his avarice, his cruelty, his ambition!

II.—Grammar.

1. (*a*) Give the chief parts of *adiuvo, tero, consero, reor.*

(*b*) Parse the following and mark the quantity of each syllable: *elabantur, solabere, genuimus, adhibito.*

2. (*a*) Write in Latin: *eighty, eight hundred, twenty times, four each.*

(*b*) Construct short sentences, with English translation, to illustrate the usage of the following words: *immo, ultro, adeo, aliquando, nedum, usque.*

(*c*) What cases in Latin express (1) time within which, (2) time during which, (3) price, (4) agency? Give an example of each.

(*d*) Illustrate the use of the subjunctive, either alone or with a particle, to express (1) a prohibition, (2) a wish, (3) a direct question.

3. Turn the following passage into *oratio obliqua*: Sequimini me et vestro imperatori, quam constituistis, operam date. Unum hoc proelium superest, quo confecto et ille suam dignitatem et nos nostram libertatem recuperabimus. Faciam hodie ut aut vivo mihi aut mortuo gratias agas.

SECOND PAPER.

Tuesday, *4th April* 1899.—12 noon *to* 2 p.m.

I. Translation.

(*a*) Cum sibi nihil vivi reliquum praeterquam linguam ad deplorandas patriae suae calamitates praefatus esset, exposuit civitatis primum suae benefacta et vetera et ea quae Persei bello praestitissent ducibus exercitibusque Romanis; tum quae

primo C. Lucretius in populares suos praetor Romanus superbe avare crudeliter fecisset, deinde quae tum cum maxime L. Hortensius faceret. Quem ad modum omnia sibi, etiam iis quae patiantur tristiora, patienda esse ducant potius, quam fide decedatur, sic quod ad Lucretium Hortensiumque attineret scire tutius fuisse claudere portas quam in urbem eos accipere. Qui exclusissent eos, Emathiam Amphipolim Maroneam Aenum incolumes esse: apud se templa omnibus ornamentis spoliata compilataque sacrilegiis C. Lucretium navibus Antium devexisse, libera corpora in servitutem abrepta, fortunas sociorum populi Romani direptas esse et quotidie diripi. Nam ex instituto C. Lucretii Hortensium quoque in tectis hieme pariter atque aestate navales socios habere, et domos suas plenas turba nautica esse.

(*b*) Ubi comperi ex eis qui ei fuere conscii,
Domum revertor maestus atque animo fere
Perturbato atque incerto prae aegritudine.
Assido: accurrunt servi: soccos detrahunt:
Video alios festinare, lectos sternere,
Coenam apparare: pro se quisque sedulo
Faciebat, quo illam mihi lenirent miseriam,
Ubi video haec, coepi cogitare: "Hem, tot mea
Solius solliciti sint causa, ut me unum expleant?
Ancillae tot me vestiant? Sumptus domi
Tantos ego solus faciam? sed gnatum unicum,
Quem pariter uti his decuit, aut etiam amplius,
Quod illa aetas magis ad haec utenda idonea est,
Eum ego hinc eieci miserum iniustitia mea.
Malo quidem me dignum quovis deputem,
Si id faciam. Nam usque dum ille vitam illam colet
Inopem, carens patria ob meas iniurias,
Interea usque illi de me supplicium dabo,
Laborans, quaerens, parcens, illi serviens."

II. Sentences.

1. They say that but for this omen the city would have been built three miles from the shore.

2. Do not believe that I am too foolish to understand how much I have lost.

3. Whether the king accepts or refuses our aid, we hope that he will gain a signal victory over all his enemies.

4. Fearing to find less water the farther he advanced, Caesar halted at Noviodunum.

5. If you ask him why he does not repent of this crime, he will answer that he ought to be honoured by every good citizen.

LATIN—Lower Standard.

Monday, *3rd October* 1898.—9 *to* 12 *o'clock.*

I. Translate:—

Notus est ille tyrannicida, qui imperfecto opere comprehensus et ab Hippia tortus, ut conscios indicaret, circumstantes amicos tyranni nominavit quibusque maxime caram salutem eius sciebat. et cum ille singulos, ut nominati *erant*, occidi iussisset, interrogavit, ecquis superesset? "tu" inquit "solus: neminem enim alium cui carus *esses* reliqui." effecit ira, ut tyrannus praesidia sua gladio suo caederet. quanto animosius Alexander? qui cum legisset epistulam matris, qua admonebatur, ut a veneno Philippi medici caveret, acceptam potionem non deterritus bibit. hoc eo magis in Alexandro laudo, quia nemo tam obnoxius irae *fuit*. quo maior autem moderatio in regibus, hoc laudanda magis est. fecit hoc et I. Caesar ille qui victoria civili clementissime usus est. cum epistulas deprehendisset ad Cn. Pompeium missas ab eis qui videbantur aut in diversis aut in neutris fuisse partibus, combussit. quamvis moderate soleret irasci, maluit tamen non posse. gratissimum putavit genus veniae *nescire* quid quisque peccasset.

(Comment upon the mood of the verbs in italics.)

II. For Latin Prose.

Atossa appeared before Darius to reproach him for sitting idle on his throne without making an effort to extend the Persian power. "A man who is young," she said, "and lord of vast kingdoms should do some great thing that the Persians may know that it is a man who rules over them." In reply Darius said that he was about to make an expedition into Scythia. "Nay," answered Atossa, "go not against the Scythians first. I have heard of the beauty of the women of Hellas and desire to have Athenian and Spartan maidens among my slaves: and thou hast here one who above all men can show thee how thou mayst do this,—I mean him who has healed thy foot." Atossa, however, could obtain nothing more than an order that some ships should be sent to spy out the land and that Democedes should serve as guide.

III. Grammar.

1. Give the genitive and accusative singular of *praeceps, iusiurandum, victrix, volgus, dos, dies;* and the nominative plural of *iter, cervix, mel, flos, pavo, genu.*

2. Give the meaning of *sexagies, nongenties, centena milia, quinquies millesimus, quadriduum a.d. iii. Kal. Ian.*

3. Give the meaning and principal parts of *frango, veto, differo, abigo, largior.*

4. Explain and distinguish: *umquam, aliquando; quoties, quandocunque; diurnus, diuturnus; sequi, sectari, consequi; distrahere, detrahere.*

5. What constructions are commonly used with the following: *opus est, taedet, licet, haud dubium est, interest, prohibeo?*

IV. Sentences.

1. He is worthy of being spared, but not of receiving a reward.

2. He enquired at what price wood was sold there.

3. We ought to destroy the one city but leave the other unharmed.

4. They said that they would have returned, if the cavalry had not gone away.

5. I do not know whether this or that is better.

MONDAY, *3rd April* 1899.—9 A.M. *to* 12 NOON.

I. Translate into English :—

Consul postquam detrectari certamen vidit postero die in consilium advocavit. "quid sibi faciendum *esset*, si Antiochus pugnandi copiam non faceret? *instare* hiemem: aut sub pellibus habendos milites, aut si concedere in hiberna vellet, differendum esse in aestatem bellum." nullum unquam hostem Romani aeque contempserunt. conclamatum undique est "*duceret* extemplo et uteretur ardore militum"; qui tanquam non pugnandum cum tot milibus hostium, sed par numerus pecorum trucidandus esset, per fossas per vallum castra invadere parati erant, si in proelium hostis non exiret. Cn. Domitius ad explorandum iter, et qua parte adiri vallum hostium *posset*, missus, postquam omnia certa rettulit, postero die propius castra admoveri placuit; tertio signa in medium campi prolata et instrui acies coepta est. nec Antiochus ultra tergiversandum ratus, ne et suorum animos minueret detrectando certamen et hostium spem augeret, et ipse copias eduxit, tantum progressus a castris ut dimicaturum appareret.

(*a*) In the above passage, account for the mood of the verbs in *italics*.

(*b*) Why is *coepta est* in the passive voice?

II. Translate into Latin :—

Having often received an invitation from my friend Sir Roger to pass away a month with him in the country, I last week accompanied him thither, and am settled with him for some

time at his country house. Sir Roger, who is very well acquainted with my humour, lets me rise and go to bed when I please, dine at his table or in my chamber as I think fit. I am the more at ease in Sir Roger's family because it consists of sober and staid persons; for, as the knight is the best master in the world, he seldom changes his servants. I could not but observe with a great deal of pleasure the joy that appeared in the countenances of these ancient domestics at my friend's arrival. Some of them could not refrain from tears at the sight of their old master; every one of them pressed forward to do something for him.

III.—Grammar.

1. Give the gender, the genitive singular and the genitive plural of *ager*, *corpus*, *senex*, *munus*, *manus*, *civis*, *pes*, *heres*, *dies*, *agmen*.

2. Conjugate and give the meaning of *seco*, *ardeo*, *tondeo*, *audeo*, *carpo*, *spargo*, *tango*, *suesco*, *nascor*, *nanciscor*.

3. Compare *utilis*, *dives*, *magnificus*, *graviter*. What adverbs are formed from *ille* and *alius*? Give the Latin for *twenty times*, *the twentieth*, *two hundred*, 13*th March*.

4. Give the exact meaning of *uter*, *uterque*, *utrinque*, *quisque*, *aliquis*, *quidam*, *quivis*. What case goes with each of the following prepositions: *inter*, *de*, *ob*, *ex*, *in*? Mark the quantity of the last syllable but one of *murus*, *opus*, *bonus*, *tibicen*, *trucidat*.

IV.—Sentences.

Translate into Latin:—

1. He warned me that danger was at hand, but he did not warn me to flee from it.

2. He promised never to forget his friends.

3. It matters not to us whether you stay at home or go back to London.

4. In my opinion you ought to have written this letter ten days ago.

5. The greater the danger, the greater the glory; and we shall show ourselves worthy of our ancestors.

GREEK—Higher Standard.

FIRST PAPER.

Wednesday, *5th October* 1898.—9 *to* 11 *o'clock.*

1. Translate:—

(*Odysseus urges his claim to the arms of Achilles against Aias.*)

Οὐ πρὸς σέ μοι μόνον ὁ λόγος, δι' ὃν ἀνέστην, ἀλλὰ καὶ πρὸς τοὺς ἄλλους ἅπαντας· πλείω γὰρ ἀγαθὰ πεποίηκα τὸ στρατόπεδον ἐγὼ ἢ ὑμεῖς ἅπαντες. καὶ ταῦτα καὶ ζῶντος ἂν ἔλεγον Ἀχιλλέως, καὶ νῦν τεθνηκότος λέγω πρὸς ὑμᾶς. ὑμεῖς γὰρ οὐδεμίαν ἄλλην μάχην μεμάχησθε ἣν οὐχὶ καὶ ἐγὼ μεθ' ὑμῶν· ἐμοὶ δὲ τῶν ἰδίων κινδύνων οὐδεὶς ὑμῶν οὐδὲν σύνοιδε. καίτοι ἐν μὲν ταῖς κοιναῖς μάχαις, οὐδὲ εἰ καλῶς ἀγωνίζοισθε, πλέον ἐγίγνετο οὐδέν· ἐν δὲ τοῖς ἐμοῖς κινδύνοις οὓς ἐγὼ μόνος ἐκινδύνευον, εἰ μὲν κατορθώσαιμι, ἅπαντα ἡμῖν ἐπετελεῖτο ὧν ἕνεκα δεῦρο ἀφίγμεθα, εἰ δ' ἐσφάλην, ἐμοῦ ἂν ἑνὸς ἀνδρὸς ἐστέρησθε. οὐ γὰρ ἵνα μαχοίμεθα τοῖς Τρωσὶ δεῦρ' ἀφίγμεθα, ἀλλ' ἵνα τήν τε Ἑλένην ἀπολάβοιμεν καὶ τὴν Τροίαν ἕλοιμεν. ταῦτα δ' ἐν τοῖς ἐμοῖς κινδύνοις ἐνῆν ἅπαντα. ὅπου γὰρ ἦν κεχρημένον ἀνάλωτον εἶναι τὴν Τροίαν, εἰ μὴ πρότερον τὸ ἄγαλμα τῆς θεοῦ λάβοιμεν τὸ κλαπὲν παρ' ἡμῶν, τίς ἐστιν ὁ κομίσας δεῦρο τὸ ἄγαλμα ἄλλος ἢ ἐγώ, ὃν σύ γε ἱεροσυλίας κρίνεις; καὶ οἱ μὲν ἄλλοι χάριν ἔχουσι, σὺ δὲ καὶ ὀνειδίζεις ἐμοί· ὑπὸ γὰρ ἀμαθίας ὧν εὖ πέπονθας οὐδὲν οἶσθα. κἀγὼ μὲν οὐκ ὀνειδίζω σοι τὴν ἀμαθίαν· ἄκων γὰρ αὐτὸ καὶ σὺ καὶ οἱ ἄλλοι πεπόνθασιν ἅπαντες· ἀλλ' ὅτι διὰ τὰ ὀνείδη τὰ ἐμὰ σῳζόμενος οὐχ οἷός τ' εἶ πείθεσθαι, ἀλλὰ καὶ προσαπειλεῖς ὡς κακὸν δράσων τι τούσδε ἐὰν ἐμοὶ τὰ ὅπλα ψηφίσωνται.

2. Translate :—

Ἄναξ, ὑπάρχει μὲν τόδ' ἐν τῇ σῇ χθονὶ,
εἰπεῖν ἀκοῦσαί τ' ἐν μέρει πάρεστί μοι,
κοὐδείς μ' ἀπώσει πρόσθεν, ὥσπερ ἄλλοθεν.
ἡμῖν δὲ καὶ τῷδ' οὐδέν ἐστιν ἐν μέσῳ·
ἐπεὶ γὰρ Ἄργους οὐδέν ἐσθ' ἡμῖν ἔτι,
ψήφῳ δοκῆσαν, ἀλλὰ φεύγομεν πάτραν,
πῶς ἂν δικαίως ὡς Μυκηναίους ἄγοι
ὅδ' ὄντας ἡμᾶς, οὓς ἀπήλασαν χθονός;
ξένοι γάρ ἐσμεν. ἢ τὸν Ἑλλήνων ὅρον
φεύγειν δικαιοῦθ' ὅστις ἂν τἄργος φύγῃ;
οὔκουν Ἀθήνας γ'· οὐ γὰρ Ἀργείων φόβῳ
τοὺς Ἡρακλείους παῖδας ἐξελῶσι γῆς.
εἰ γὰρ τόδ' ἔσται καὶ λόγους κρανοῦσι σοὺς,
οὐκ οἶδ' Ἀθήνας τάσδ' ἐλευθέρας ἔτι.
ἀλλ' οἶδ' ἐγὼ τὸ τῶνδε λῆμα καὶ φύσιν·
θνήσκειν θελήσουσ'· ἡ γὰρ αἰσχύνη πάρος
τοῦ ζῆν παρ' ἐσθλοῖς ἀνδράσιν νομίζεται.

Or,

Τοῖσι δὲ Πουλυδάμας πεπνυμένος ἦρχ' ἀγορεύειν
Πανθοίδης· ὁ γὰρ οἷος ὅρα πρόσσω καὶ ὀπίσσω.
Ἕκτορι δ' ἦεν ἑταῖρος, ἰῇ δ' ἐν νυκτὶ γένοντο·
ἀλλ' ὁ μὲν ἄρ μύθοισιν, ὁ δ' ἔγχεϊ πολλὸν ἐνίκα.
ὅ σφιν ἐϋφρονέων ἀγορήσατο καὶ μετέειπεν·
"ἀμφὶ μάλα φράζεσθε φίλοι· κέλομαι γὰρ ἔγωγε
ἄστυδε νῦν ἰέναι, μὴ μίμνειν ἠῶ δῖαν
ἐν πεδίῳ παρὰ νηυσίν· ἑκὰς δ' ἀπὸ τείχεός εἰμεν.
ὄφρα μὲν οὗτος ἀνὴρ Ἀγαμέμνονι μήνιε δίῳ,
τόφρα δὲ ῥηΐτεροι πολεμίζειν ἦσαν Ἀχαιοί·
χαίρεσκον γὰρ ἔγωγε θοῇς ἐπὶ νηυσὶν ἰαύων,
ἐλπόμενος νῆας αἱρησέμεν ἀμφιελίσσας.
νῦν δ' αἰνῶς δείδοικα ποδώκεα Πηλείωνα·
οἷος ἐκείνου θυμὸς ὑπέρβιος, οὐκ ἐθελήσει

μίμνειν ἐν πεδίῳ, ὅθι περ Τρῶες καὶ Ἀχαιοὶ
ἐν μέσῳ ἀμφότεροι μένος Ἄρηος δατέονται,
ἀλλὰ περὶ πτόλιός τε μαχήσεται ἠδὲ γυναικῶν.
ἀλλ' ἴομεν προτὶ ἄστυ, πίθεσθέ μοι."

SECOND PAPER.

WEDNESDAY, *5th October* 1898.—12 *to* 2 *o'clock.*

I.—SENTENCES.

1. The messenger returned from the port late at night and reported that the ships would sail early next morning unless a storm should arise before daybreak.

2. I said I did not think he would ever have allowed his friends to undergo such hardships if he had known in what distress they were.

3. It is far worse to be spoken ill of by our friends than to be ill-treated by those whom we know to be our enemies. From our enemies we do not expect anything else; but, if our friends abandon us, whom are we to trust, and where are we to turn?

4. If you do not get home before your brother comes from town, I am sure you will be punished for your delay. When I saw him I thought he was very angry and intended to tell your father everything you had done.

5. The city will never be at peace until the men who are guilty of betraying the gates to the enemy have been arrested, tried, convicted, and punished for all their crimes.

II.—GRAMMAR.

1. Give the 1st pers. sing. future indicative (all voices), the 1st pers. sing. aorist indicative (all voices), and the 1st pers. sing. perfect indicative active of *ἀμφιέννυμι, ἐγείρω, ζῶ, καίω, πίνω, πωλῶ, στρέφω, προσέρχομαι.*

2. Distinguish λόγους ποιεῖν, λόγους ποιεῖσθαι—ἀποδοῦναι, ἀποδόσθαι — νόμον τιθέναι, νόμον τίθεσθαι — οὐκ ἤθελε, οὐκ ἐβούλετο.

3. Translate and explain the syntax of :—

(1) Τί σιγᾷς, δέον λέγειν ;

(2) Εἰ γὰρ παρῆσθα ἵνα πληγὰς ἔλαβες.

(3) Οὐκ ἄν οἶομαί σε ταῦτα δρᾶσαι.

(4) Ὅπως μὴ ἐρεῖς τοῦτο μηδενί.

(5) Οὐδεὶς ἤδει τὸν ἄνθρωπον ὅστις εἴη.

4. Give the Greek for : "He will come in the evening," "he bathes in the evening," "he gives a drachma a day," "he bathes every day."

5. Explain and illustrate the construction of verbs of fearing.

FIRST PAPER.

WEDNESDAY, *5th April* 1899.—9 *to* 11 A.M.

I. Translate :—

The Natural Advantages of Egypt.

Τὴν μὲν οὖν μητρῴαν ἀρχὴν ὑπερεῖδεν ἐλάττω νομίσας ἢ κατὰ τὴν αὐτοῦ φύσιν εἶναι, πλείστους δὲ καταστρεψάμενος καὶ μεγίστην δύναμιν κτησάμενος ἐν Αἰγύπτῳ κατεστήσατο τὴν βασιλείαν, οὐκ ἐκ τῶν παρουσῶν μόνον ἀλλ' ἐξ ἁπασῶν προκρίνας τὴν ἐκεῖ πολὺ διαφέρειν οἴκησιν. ἑώρα γὰρ τοὺς μὲν ἄλλους τόπους οὐκ εὐκαίρως οὐδ' εὐαρμόστως πρὸς τὴν τοῦ σύμπαντος φύσιν ἔχοντας, ἀλλὰ τοὺς μὲν ὑπ' ὄμβρων κατακλυζομένους, τοὺς δ' ὑπὸ καυμάτων διαφθειρομένους, ταύτην δὲ τὴν χώραν ἐν καλλίστῳ μὲν τοῦ κόσμου κειμένην, πλεῖστα δὲ καὶ παντοδαπώτατα φέρειν δυναμένην, ἀθανάτῳ δὲ τείχει τῷ Νείλῳ τετειχισμένην, ὃς οὐ μόνον φυλακὴν ἀλλὰ καὶ τροφὴν ἱκανὴν αὐτῇ παρέχειν πέφυκεν, ἀνάλωτος μὲν ὢν καὶ δύσμαχος τοῖς ἐπιβουλεύουσιν, εὐαγωγὸς δὲ καὶ πρὸς πολλὰ χρήσιμος τοῖς ἐντὸς αὐτοῦ κατοικοῦσιν. πρὸς γὰρ τοῖς προειρημένοις καὶ τὴν δύναμιν αὐτῶν πρὸς τὴν τῆς γῆς ἐργασίαν ἰσόθεον πεποίηκεν· τῶν γὰρ

ὄμβρων καὶ τῶν αὐχμῶν τοῖς μὲν ἄλλοις ὁ Ζεὺς ταμίας ἐστίν, ἐκείνων δ' ἕκαστος ἀμφοτέρων τούτων αὐτὸς αὑτῷ κύριος καθέστηκεν.

II. Translate one or other of the following passages :—

(*a*) *The disaster of Salamis is announced to Atossa, the mother of Xerxes.*

ΑΓΓΕΛΟΣ. Ξέρξης δ' ἀνώμωξεν κακῶν ὁρῶν βάθος·
ἕδραν γὰρ εἶχε παντὸς εὐαγῆ στρατοῦ,
ὑψηλὸν ὄχθον ἄγχι πελαγίας ἁλός·
ῥήξας δὲ πέπλους κἀνακωκύσας λιγύ,
πεζῷ παραγγείλας ἄφαρ στρατεύματι,
ἵησ' ἀκόσμῳ ξὺν φυγῇ. τοιάνδε σοι
πρὸς τῇ πάροιθε ξυμφορὰν πάρα στένειν.

ΑΤΟΣΣΑ. ὦ στυγνὲ δαῖμον, ὡς ἄρ' ἔψευσας φρενῶν
Πέρσας· πικρὰν δὲ παῖς ἐμὸς τιμωρίαν
κλεινῶν Ἀθηνῶν ἦρε, κοὐκ ἀπήρκεσαν
οὓς πρόσθε Μαραθὼν βαρβάρων ἀπώλεσεν,
ὧν ἀντίποινα παῖς ἐμὸς πράξειν δοκῶν,
τοσόνδε πλῆθος πημάτων ἐπέσπασεν.
σὺ δ' εἰπὲ ναῶν αἳ πεφεύγασιν μόρον,
ποῦ τάσδ' ἔλειπες; οἶσθα σημῆναι τορῶς;

Or,

(*b*) "Ἀτρείδη, σοὶ πρῶτα μαχήσομαι ἀφραδέοντι,
ἥ θέμις ἐστὶν, ἄναξ, ἀγορῇ· σὺ δὲ μή τι χολωθῇς.
ἀλκὴν μέν μοι πρῶτον ὀνείδισας ἐν Δαναοῖσιν,
φὰς ἔμεν ἀπτόλεμον καὶ ἀνάλκιδα· ταῦτα δὲ πάντα
ἴσασ' Ἀργείων ἠμὲν νέοι ἠδὲ γέροντες.
σοὶ δὲ διάνδιχα δῶκε Κρόνου παῖς ἀγκυλομήτεω·
σκήπτρῳ μέν τοι δῶκε τετιμῆσθαι περὶ πάντων,
ἀλκὴν δ' οὔτοι δῶκεν, ὅ τε κράτος ἐστὶ μέγιστον.
δαιμόνι', οὕτω που μάλα ἔλπεαι υἷας Ἀχαιῶν
ἀπτολέμους τ' ἔμεναι καὶ ἀνάλκιδας ὡς ἀγορεύεις;

εἰ δὲ σοὶ αὐτῷ θυμὸς ἐπέσσυται ὥστε νέεσθαι,
ἔρχεο· πάρ τοι ὁδὸς, νῆες δέ τοι ἄγχι θαλάσσης.
ἀλλ' ἄλλοι μενέουσι καρηκομόωντες Ἀχαιοὶ,
εἰσόκε περ Τροίην διαπέρσομεν. εἰ δὲ καὶ αὐτοὶ,
φευγόντων σὺν νηυσὶ φίλην ἐς πατρίδα γαῖαν·
νῶϊ δ', ἐγὼ Σθένελός τε, μαχησόμεθ', εἰσόκε τέκμωρ
Ἰλίου εὕρωμεν· σὺν γὰρ θεῷ εἰλήλουθμεν."

SECOND PAPER.

WEDNESDAY, *5th April* 1899.—12 NOON *to* 2 P.M.

I.—SENTENCES.

1. The king asked the messenger whence he came and who had sent him.

2. I should not be surprised if your son should become a distinguished man. He is already a better speaker than many older men.

3. If you do not walk faster you will not arrive before they go to dinner.

4. Everyone was indignant at a man of his character using such language. Only those, they thought, who are themselves free from reproach have a right to be so hard on others if they make a mistake.

5. I do not think he would have betrayed the city to the enemy unless all his friends had been put to death or driven into exile by the party in power.

6. The Athenians are justly blamed for having put Socrates, the wisest of men, to death. Most of them, however, really believed that he was an atheist, and that their sons would be utterly corrupted if they associated with him.

II.—GRAMMAR.

1. Give the future infinitive, aorist infinitive and perfect

infinitive in all voices used, of *καθίστημι, ἀπαγορεύω, ἀφαιρῶ, ἐπαίρω, μεταλαμβάνω, διαφέρω, ἀποκτείνω, ἐμπίμπρημι, ἀναμιμνήσκω, παρατίθημι.*

2. How do you express the passive of *φόνου διώκειν, εὖ ποιῶ τοὺς φίλους, οἱ πολλοὶ εὖ λέγουσί με, τοὺς φυγάδας κατάγουσιν οἱ πολῖται.*

3. Translate and explain the syntax of :—

(*a*) *οὐδενὸς ὅτου οὔ δεινότερός ἐστι λέγειν.*

(*b*) *χρῆν πρῳαίτερον ἀναστῆναι ἵν' εἶδες τὸν ἥλιον ἀνέχοντα.*

(*c*) *οὐκ ἂν ᾤμην ποτὲ οὕτω δεινὰ παθεῖν.*

(*d*) *οὐκ ἂν εἴποιμι πλείω, πόλλ' ἂν ἔχων λέγειν.*

(*e*) *εἰ μὴ καθέξεις γλῶτταν, ἔσται σοι κακά.*

4. Give the Greek for : "Four times a month," "Come in the evening," "Do not tell any one," "He had just come," "Be sure to tell me."

5. Explain by examples the use of the particles *καὶ μήν, δήπου, νῦν δή, καίτοι, μέντοι, ἄρα.*

Lower Standard.

Saturday, 1*st October* 1898.—3 *to* 6 *o'clock.*

I. Translate :—

Ὁ δὲ Ξενοφῶν ὡς εἶδε τὰ γιγνόμενα, δείσας μὴ τὸ στράτευμα ἐφ' ἁρπαγὴν τράποιτο καὶ ἀνήκεστα[1] κακὰ γένοιτο τῇ πόλει καὶ ἑαυτῷ καὶ τοῖς στρατιώταις, ἔθει καὶ συνεσπίπτει εἴσω τῶν πυλῶν σὺν τῷ ὄχλῳ. οἱ δὲ Βυζάντιοι ὡς εἶδον τὸ στράτευμα βίᾳ εἰσπίπτον, φεύγουσιν ἐκ τῆς ἀγορᾶς, οἱ μὲν εἰς τὰ πλοῖα, οἱ δὲ οἴκαδε, ὅσοι δὲ ἔνδον ἐτύγχανον ὄντες ἔξω ἔθεον, οἱ δὲ καθεῖλκον τὰς τριήρεις ὡς ἐν ταῖς τριήρεσι σώζοιντο, πάντες δὲ ᾤοντο τὴν πόλιν ἁλωκέναι. ὁ δὲ Ἐτεόνικος εἰς τὴν ἄκραν ἀποφεύγει. ὁ δὲ Ἀναξίβιος καταδραμὼν ἐπὶ θάλατταν ἐν πλοίῳ περιέπλει εἰς τὴν ἀκρόπολιν, καὶ εὐθὺς μεταπέμπεται ἐκ Καλχηδόνος φρουρούς· οἱ γὰρ ἐν τῇ ἀκρο-

πόλει οὐχ ἱκανοὶ ἐδόκουν εἶναι τοὺς ἄνδρας σχεῖν. οἱ δὲ στρατιῶται ὡς εἶδον τὸν Ξενοφῶντα, προσπίπτουσιν αὐτῷ πολλοὶ καὶ λέγουσι, Νῦν σοι ἔξεστιν, ὦ Ξενοφῶν, ἀνδρὶ γενέσθαι. ἔχεις πόλιν, ἔχεις τριήρεις, ἔχεις χρήματα, ἔχεις ἄνδρας τοσούτους. νῦν, εἰ βούλοιο, ἡμεῖς σὲ μέγαν ἂν ποιήσαιμεν.

[1] ἀνήκεστα = incurable.

II. Grammar.

1. Give genitive singular and dative plural of: ὀδούς, ἅλως, ὄρος, υἱός, λῃστής, ἱππεύς, ἐσθής, ἀσπίς.

2. Compare χαρίεις, ἡδύς, εὐγενής, εὔνους; and give the nom. plural, all genders, of each adjective.

3. Give the acc. plural, all genders, of οὗτος, αὐτός, ἀλλήλω; πᾶς, τέτταρες, εἴκοσι; and the Greek for *7th*, 10 *times*, 352.

4. Write down the future indicative active, aorist active, perfect middle or passive, where existing, of ἄγω, ἀκούω, τίθημι, πίμπλημι, ἔχω, γιγνώσκω.

5. Write down the aorist and perfect participles of ἵστημι; the 2nd singular of all the imperatives of αἰσθάνομαι.

6. Translate the following phrases:—πρὸς τούτοις, μετὰ ταῦτα, παρὰ δύναμιν, κατὰ τρεῖς, ἐπὶ Κύρου, ὁ τοῦ Φιλίππου.

III. Sentences.

Render into Greek:—

(*a*) The boy wishes to know if the lion had a big head.

(*b*) The black sailors hoped to reach the harbour in three days.

(*c*) I shall not answer the king before our messenger leaves the city.

(*d*) If the Greeks were to conquer these barbarians, they would become more powerful than before.

(*e*) She said she had never seen an elephant herself, but her brother had seen many.

SATURDAY, 1*st April* 1899.—3 *to* 6 P.M.

I. Translate:—

Καὶ κραυγὴ μὲν οὐδεμία παρῆν, οὐ μὴν οὐδὲ σιγή, φωνὴ δέ τις ἦν τοιαύτη οἵαν ὀργή τε καὶ μάχη παράσχοιτ' ἄν. τέλος δὲ τῶν Θηβαίων οἱ μὲν διαπίπτουσι πρὸς τὸν Ἑλικῶνα, πολλοὶ δ' ἀποχωροῦντες ἀπέθανον. ἐπειδὴ δὲ ἡ μὲν νίκη σὺν Ἀγησιλάῳ ἐγένετο, τετρωμένος δ' αὐτὸς προσηνέχθη πρὸς τὴν φάλαγγα, προσελάσαντές τινες τῶν ἱππέων λέγουσιν αὐτῷ ὅτι τῶν πολεμίων ὀγδοήκοντα σὺν τοῖς ὅπλοις ὑπὸ τῷ ναῷ εἰσι, καὶ ἠρώτων τί χρὴ ποιεῖν. ὁ δὲ καίπερ πολλὰ τραύματα ἔχων παντόσε καὶ παντοίοις ὅπλοις ὅμως οὐκ ἐπελάθετο τοῦ θείου, ἀλλ' ἐᾶν τε ἀπιέναι ὅποι βούλοιντο ἐκέλευε καὶ ἀδικεῖν οὐκ εἴα καὶ προπέμψαι ἐπέταξε τοὺς ἀμφ' αὐτὸν ἱππέας, ἔστε ἐν τῷ ἀσφαλεῖ ἐγένοντο. τότε μὲν οὖν, καὶ γὰρ ἦν ἤδη ὀψέ, συνελκύσαντες τοὺς τῶν πολεμίων νεκροὺς εἴσω φάλαγγος ἐδειπνοποιήσαντο καὶ ἐκοιμήθησαν.

II. GRAMMAR.

1. Parse, giving the 1st person singular future active, aorist active, perfect active and aorist passive: ἐκπεπτωκυίας, διελέσθαι, ἐλάσαι.

2. Give the genitive singular and dative plural of πατήρ, κύων, ὀδούς, ὕδωρ, πούς, κέρας, γραῦς, γέρων, θρίξ, χείρ.

3. Compare αἰσχρός, σοφός, μωρός, σώφρων, φίλος, ἐρρωμένος.

4. Give the 1st person singular future, aorist and perfect, in all voices used, of λαγχάνω, ἐσθίω, ἀκούω, ὁρῶ, αἰσθάνομαι, φέρω.

5. Write:—

(*a*) The perfect infinitive middle or passive of πείθω, σπένδω, ἄγω.

(*b*) The 3rd singular imperfect indicative of εἶναι, ἰέναι, ἴέναι, εἰδέναι, ἔπεσθαι.

(*c*) The aorist infinitive active of ἔχω, πίνω, ἀναμιμνήσκω, ἀποκτείνω, πίπτω, δείκνυμι.

6. Translate παρ' ἐμέ, παρ' ὑμῖν, παρ' ἐκείνου, ἐπ' ἐμοῦ, ἐπ' ἐμοί, ἐπ' ἐμέ, πρὸς τούτοις, πρὸς ταῦτα.

III. Sentences.

1. Do not give the book to any one.
2. You ought to have told me this.
3. If you learn from the sophist, you will be wise.
4. If you had been there, you would have seen your brother.
5. He did not know where the general was going.

MATHEMATICS—Intermediate and Higher.

FIRST PAPER.

THURSDAY, 6*th October* 1898.—9 *to* 11 A.M.

Candidates may obtain full marks by doing correctly about two-thirds of this paper. But the Examiners may reject a candidate who shows exceptional weakness in any of the sections A, B, C.

The pass mark for Intermediate Candidates is fixed with reference to the total number of marks assigned to questions which fall under the syllabus of the Intermediate Standard; but such Candidates will receive credit for any question they may answer.

A.

1. Two workmen A and B can together do a piece of work in 12 days. A can do as much in 3 days as B can do in 4. If A works alone for 4 days and is then joined by B, when will the work be finished?

2. Find the highest common factor of

$$9x^5+3x^2-x-1 \text{ and } 3x^4+2x^2-1.$$

3. Simplify

(i) $\left(\frac{x}{y}-2+\frac{y}{x}\right)\left(\frac{x}{y}+2+\frac{y}{x}\right)\left(\frac{x^2}{y^2}+2+\frac{y^2}{x^2}\right)$;

(ii) $\frac{x-b-c}{x+a}+\frac{x-c-a}{x+b}+\frac{x-a-b}{x+c}-3.$

4. Solve the following systems of equations:

$$\text{(i)}\quad \frac{x-a}{b}+\frac{y}{a+b}=\frac{x}{a-b}-\frac{y-b}{a}=0;$$

$$\text{(ii)}\quad x-\frac{1}{y}=\frac{5}{3},\quad y-\frac{1}{x}=\frac{5}{2}.$$

5. The height, breadth, and length of a room are proportional to the numbers 3, 5, and 8; if each of the dimensions were increased by a foot, the area of the four walls would be 156 square yards. Find the dimensions of the room.

6. Find the relation between the coefficients a, b, c of the equation $ax^2+bx+c=0$, in order that the roots may be real.

Show that the expression $12x-4x^2-3$ cannot be greater than 6, if x be any real number.

7. If $a:b=c:d$ and $m:n=p:q$,

prove that

$$ma+nb:ma-nb=pc+qd:pc-qd.$$

B.

8. The complements of the parallelograms which are about the diagonal of any parallelogram are equal.

Prove that the second diagonals of the parallelograms about the diagonal are parallel.

9. Angles in the same segment of a circle are equal.

BAC, BDC are isosceles triangles on opposite sides of the same base, and ABD is a right angle. Through E any point of BC, FEG is drawn perpendicular to ED to meet AB, AC, produced if necessary in F, G. Prove EF equal to EG.

10. Construct an isosceles triangle having each of the angles at the base double of the vertical angle.

On a given straight line describe a regular decagon.

11. If four straight lines be proportionals, the rectangle contained by the extremes is equal to the rectangle contained by the means.

Two circles touch externally; if the diameter of one circle be four times that of the other, prove that each common tangent is equal to the radius of the greater circle.

C.

12. Define $\tan\theta$ as a function of θ for all real values of θ, and indicate graphically or otherwise how this function varies as θ varies from 0 to 2π.

Show that $\dfrac{\tan\theta}{1-\cot^2\theta}+\dfrac{\cot\theta}{1-\tan^2\theta}=\tan\theta+\cot\theta.$

13. Find one value of A satisfying the equation

$$\frac{\cos A}{1+\sin A}=2-\tan A.$$

14. ABC is an acute-angled triangle; CD is drawn perpendicular to AB, meeting it at D, and DE perpendicular to CA, meeting it at E. Prove

$$CE=EA\tan^2 A.$$

15. From two stations in a horizontal plane, in a line with the foot of a tower and on the same side of it, the angles of elevation of the tower are α and β. If the stations be a feet apart, show that the height of the tower is

$$\frac{a\sin\alpha\sin\beta}{\sin(\beta-\alpha)}.$$

SECOND PAPER.

THURSDAY, *6th October* 1898.—12 NOON *to* 2 P.M.

A.

1. A draper buys £150 worth of silk goods, and fixes his sale price at 23 per cent. above cost. After selling two-thirds of the goods at the sale price, he sells off the rest at a reduction of 30 per cent. on the sale price. How much does he gain or lose on this transaction?

2. (i) Expand and arrange $(x-1)(x+1)^4+(x+1)(x-1)^4$ according to powers of x.

(ii) Find the coefficient of x^2 in

$$\left(x-\frac{b^2-c^2}{a}\right)(x-a)^3+\left(x-\frac{c^2-a^2}{b}\right)(x-b)^3+\left(x-\frac{a^2-b^2}{c}\right)(x-c)^3.$$

3. If x^3+px^2+qx+1 be exactly divisible by $(x-1)^2$, find p and q.

4. Factorise $(x-1)^2-2x^2$, ... (i)

$2x^3+3x^2-3x-2$, . . . (ii)

$(x-y)^2+3(x-y)+2$, . . (iii).

5. Prove from first principles that $\sqrt{a}\sqrt{b}\sqrt{c}=\sqrt{(abc)}$; and point out any restrictions on the operands or meanings of the operations which are involved in your demonstration.

Simplify $\dfrac{(\sqrt{2}+1)^2}{\sqrt{2}-1}+\dfrac{(\sqrt{2}-1)^2}{\sqrt{2}+1}$.

6. Solve the following equations:

$$(x-1)^2(x-3)+(x-3)^2(x-1)=2(x-1)^2, \quad . \quad . \quad . \quad \text{(i)}$$

$$\frac{x}{x^2-a^2}+\frac{x}{x^2-b^2}+\frac{x}{x^2-c^2}=\frac{a}{x^2-a^2}+\frac{b}{x^2-b^2}+\frac{c}{x^2-c^2}, \quad \text{(ii)}.$$

B.

7. In the triangles ABC, $A'B'C'$, $AB=A'B'$, $AC=A'C'$, and the angle B = the angle B'; show that the angles C and C' are either equal or supplementary.

If the angles C and C' are supplementary, show that the rectangle $BC.B'C'$ is equal to the difference of the squares on BA and AC.

8. Show that if two circles touch, the point of contact lies in the straight line joining their centres.

Three circles, whose centres are A, B, C, touch in pairs externally at P, Q, R; show that the circle which passes through PQR is inscribed in the triangle ABC.

9. Give Euclid's definition of Similar Figures.

Prove that equiangular triangles are similar.

O is a point on the diagonal AC of a rectangle $ABCD$. BO and DO meet DC and BC respectively in Q and P; prove that PQ is parallel to BD.

10. When is a straight line said to be perpendicular to a plane?

Show that if a straight line be perpendicular to any two straight lines in a plane it is perpendicular to the plane.

A is one vertex of a cube, and BCD the three adjacent vertices. Calculate the distance of A from the plane BCD in terms of the length of the edge of the cube.

C.

11. Prove $\sin(90^\circ - A) = \cos A$, when A is an acute angle.

12. Given $\sin 22^\circ 37' = \frac{5}{13}$, find the value of

$$\sin 67^\circ 23' + \cos 67^\circ 23'.$$

13. Assuming the fundamental addition-theorem for the circular functions, viz., $\sin(A \pm B) = \sin A \cos B \pm \cos A \sin B$, show that $\sin^2 A - \sin^2 B = \sin(A+B)\sin(A-B)$.

If $\theta = \frac{1}{8}\pi$, show either by means of trigonometrical formulae or by geometrical construction that $\tan\theta + \cot\theta = 2\sqrt{2}$.

14. In the triangle ABC, the angles B and C are both acute. Given that $AB = 6{\cdot}384$, $AC = 7{\cdot}563$, and that the distance of A from BC is $4{\cdot}632$, find all the angles of the triangle.

$$\log 6{\cdot}384 = {\cdot}8050929\,; \quad \log 7{\cdot}563 = {\cdot}8786941\,;$$
$$\log 4{\cdot}632 = {\cdot}6657686.$$
$$\log \sin 46^\circ 30' = \bar{1}{\cdot}8605622, \text{ Diff. } 1199\,;$$
$$\log \sin 37^\circ 46' = 1{\cdot}7870687, \text{ Diff. } 1630.$$

FIRST PAPER.

THURSDAY, 6*th April* 1899.—9 *to* 11 A.M.

A.

1. Three partners, A, B, C, put each £653 into a uniformly profitable business. After nine months A withdraws £300 of his capital, which is made good in equal shares by B and C. The total profit at the end of the year is £235; calculate to the nearest pound the shares of A, B, and C respectively in this profit.

2. State the Algebraic Law of Distribution for Multiplication and for Division.

(i) Distribute and arrange

$$(-x+y+z)^2(x+y+z)+(x-y+z)^2(x+y+z)+(x+y-z)^2(x+y+z);$$

(ii) Find the coefficient of x^4 in

$$(1+x+x^2+x^3+x^4)(1-x+x^2-x^3+x^4).$$

3. Prove that the remainder when

$$a_nx^n+a_{n-1}x^{n-1}+\ldots+a_1x+a_0$$

is divided by $x-\lambda$ is $a_n\lambda^n+a_{n-1}\lambda^{n-1}+\ldots+a_1\lambda+a_0$;

(i) Factorise $101x^2+201x+100$;

(ii) Factorise $x^3-(p+14)x^2+(14p+48)x-48p$.

4. Express the following as single rational fractions at lowest terms

(i) $$-\frac{1}{4(x-1)}+\frac{x^2+2x+1}{4(x^3+x^2+x+1)}+\frac{x+5}{2(x^2+1)^2};$$

(ii) $$\frac{(b-c)(x-b-c)}{x^2-(a+b+c)x+a(b+c)}+\frac{(c-a)(x-c-a)}{x^2-(a+b+c)x+b(c+a)}+\frac{(a-b)(x-a-b)}{x^2-(a+b+c)x+c(a+b)}.$$

5. Show that numerical quantities a, b, c can be found such that

$$x^2+1=a(x^2+x+1)+(bx+c)(x-1).$$

6. Solve the following:

(i) $(b-c)x^2(x^2-a^2)+(c-a)x^2(x^2-b^2)+(a-b)x^2(x^2-c^2)$
$=p^2(b-c)(c-a)(a-b)$;

(ii) $x+y+z=6$, $2x+3y+z=13$, $x^2+y^2+z^2-xy=8$.

B.

7. Prove that the area of a trapezium is equal to the area of the rectangle contained by half the sum of the parallel sides and the distance between them.

If the sum of the perpendiculars from the vertices A and B of the triangle ABC on the opposite sides be equal to AB, show that the area of the triangle is

$$\tfrac{1}{2}abc/(a+b)$$

where a, b, c mean the lengths of BC, CA, AB respectively.

8. Prove that the sum of the squares on the sides of a triangle is double the sum of the squares on the median and on half the base.

$ABCD$ is a rhombus whose side is given, and O a point on the diagonal BD whose distance (OA or OC) from A or C is also given; show that the rectangle $OB.OD$ is constant, notwithstanding that the Rhombus is not completely determined by these data.

9. Show how to construct the common tangent to two given circles.

To describe a chord of a given circle which shall have a given length, and shall touch a given circle.

10. Show that any straight line is cut by three given parallel planes in a given ratio.

O is a fixed point outside a fixed plane X; P is any point in X, and Q divides OP in a given ratio. Find the locus of Q.

C.

11. Express $\sin A$ in terms of $\cos A$, $\tan A$, and $\sec A$.

Find all the values of x that satisfy the equation

$$\sin^3 x \sec^2 x + 1 = \sec^2 x.$$

12. Deduce from a geometrical figure the value of tan 15°.

13. Prove that the length of a chord of a given circle is proportional to the sine of either of the angles which it subtends at the circumference.

If D be the projection of the vertex A on the side BC of the triangle ABC, and E and F the projections of D on AC and AB respectively, show that

$$EF = 2R \sin A \sin B \sin C,$$

R being the radius of the circum-circle of ABC.

14. AB and ED are perpendicular to the horizontal line BD, and C is a point in BD. BC subtends angles α and β at A and E respectively, and γ is the angular depression below the horizontal of B as seen from E. Given also that $AB=h$, find a logarithmic formula for calculating DE in terms of α, β, γ, h.

SECOND PAPER.

THURSDAY, 6*th April* 1899.—12 NOON *to* 2 P.M.

A.

1. A clock which is set right at 12 noon indicates 5 minutes past 7 the same evening when the true time is 7 o'clock; what is the true time when the clock indicates 10 on the same evening?

2. If $x=a^2-bc$, $y=b^2-ca$, $z=c^2-ab$, prove

(i) $ax+by+cz=(a+b+c)(x+y+z)$,

(ii) $\dfrac{x^2-yz}{a}=\dfrac{y^2-zx}{b}=\dfrac{z^2-xy}{c}$.

3. Solve the equations

(i) $\dfrac{1}{x+6}+\dfrac{2}{x-3}+\dfrac{3}{x+2}=\dfrac{6}{x+1}$,

(ii) $\dfrac{(x-a)(x-b)}{(x-ac)(x-bc)}=\dfrac{(x+a)(x+b)}{(x+ac)(x+bc)}$.

4. Show that the two equations

$$x^2+ax+b=0 \text{ and } x^2+bx+a=0$$

will have a common root if either $a-b=0$ or $a+b+1=0$.

Show that if the roots of the equation

$$(a^2+b^2)x^2+2(ac+bd)x+c^2+d^2=0$$

be real, they will be equal, and find the equal roots.

5. A boy has a number of bags and a number of marbles; he puts one marble into each bag and has 48 marbles left; he divides the 48 marbles into as many equal groups as he has bags, and puts one of the groups into one of the bags; there are now altogether 19 marbles in the bags. How many marbles has he?

6. If $a:b=c:d=e:f$, show that each ratio is equal to

$$\sqrt[n]{(pa^n+qc^n+re^n)} : \sqrt[n]{(pb^n+qd^n+rf^n)}.$$

If a, b, c, d are in continued proportion, prove that

$$(pa+qb)(qc+rd)=(qb+rc)(pb+qc).$$

B.

7. Describe a square equal in area to a given rectilineal figure.

Show how to describe a rectangle equal in area to a given square, and having its perimeter three times that of the square.

8. If two chords of a circle intersect, show that the rectangle contained by the segments of the one is equal to the rectangle contained by the segments of the other.

A variable circle passes through two fixed points and intersects a fixed circle; show that the common chord of the variable circle and the fixed circle passes through a fixed point on the line joining the given points.

9. Inscribe a circle in a given regular pentagon.

Prove that the bisectors of all the angles of any regular polygon meet in a point.

10. If two triangles have one angle of the one equal to one

angle of the other, and the sides about these angles proportional, they shall be similar.

Given an angle of a triangle in position and magnitude, and also the ratio of the sides containing it, find the locus of the centre of the circumscribing circle of the triangle.

C.

11. Give a construction for dividing an angle into two parts which shall have their sines in the given ratio of m to n.

12. If $\frac{\sin x}{\sin y} = \sqrt{2}$ and $\frac{\tan x}{\tan y} = \sqrt{3}$, find the value of x and the corresponding value of y.

13. ABC is a triangle in a horizontal plane with a right angle at C, and M is the middle point of AB; a flagstaff is set up at C, and it is found that its angles of vertical elevation at A, B, M are α, β, θ respectively. Show that

$$\tan^2\theta = 2 \tan\alpha \tan\beta \sin 2A,$$

where A is the angle BAC.

14. Find the value of $\sqrt{\left(\frac{\sin 36^\circ\ 15'}{3 \tan 24^\circ\ 30'}\right)}$, given

$\log \sin 36^\circ\ 15' = 1{\cdot}7718150$, $\log 3 = {\cdot}4771213$,
$\log \tan 24^\circ\ 30' = 1{\cdot}6587041$, $\log 6{\cdot}5765 = {\cdot}8179948$.

Lower Standard.

Monday, 3*rd October* 1898.—2 *to* 5 P.M.

Candidates may obtain FULL *marks by doing about two-thirds of this paper. But the Examiners may reject a candidate who shows exceptional weakness in any of the sections A, B, C.*

A.

1. State and justify the rule for adding $\frac{3}{4}$ and $\frac{5}{8}$ so as to obtain a single equivalent fraction.

Express as a single vulgar fraction

$$3\times(\tfrac{3}{4}-\tfrac{5}{8})\times(\tfrac{5}{6}-\tfrac{1}{2})-\tfrac{1}{8}\div\tfrac{3}{2}.$$
$$\tfrac{1}{3}-\tfrac{1}{6}$$

2. Evaluate $\dfrac{3{\cdot}68\times1{\cdot}00063-2{\cdot}1008}{6{\cdot}503145}$

correctly to four places of decimals.

3. Find the amount of the following bill :—

13 lbs. 4 oz.	cheese at		9d. per lb.
$5\frac{1}{2}$ lbs.	tea	,,	2s. 7d. ,,
5 tons 16 cwt.	coals	,,	17s. per ton.

4. What is the price in francs per metre of cloth which is sold at 14s. 3d. per yard? Given that a metre is 39·37 inches; and that the exchange value of £1 is 25·23 francs.

5. A man paid to the Inland Revenue £31, 15s. 5d. of income tax and house duty. Part of this was house duty at the rate of $6\frac{1}{2}$d. per £ on a rental of £150; and the rest was income tax at the rate of 7d. per £. What was the man's income?

B.

6. What is meant by the degree of an integral function (integral expression) of x?

Arrange the following according to powers of x :—

$$(x+1)(1-x)^2+(x+2)(2-x)^2+(x+3)(3-x)^2.$$

What is the degree in x?

7. When is one integral function (integral expression) said to be exactly divisible by another?

Simplify $\dfrac{x^3+8}{x+2}+\dfrac{x^3-8}{x-2}$.

8. Resolve each of the following into as many factors as you can :—

(i) $3(x+1)^2+(2x+1)^2-x^2$;

(ii) $(a+b)^2-(c+d)^2+(a+c)^2-(b+d)^2$.

9. Express each of the following as a single fraction in its lowest terms:—

(i) $$\frac{\left(\frac{x+1}{x-1}\right)^2-x^2}{\frac{x+1}{x-1}-x};$$

(ii) $$\frac{x+y}{y}-\frac{2x}{x+y}+\frac{x^3-x^2y}{y^3-x^2y}.$$

10. Solve the equation:

$$6\left\{x-\frac{1}{6}\,\frac{x+1}{x-1}\right\}=3\left\{x-6-\frac{1}{3}\,\frac{x+1}{x-1}\right\};$$

also the system:

$$\frac{x}{a}+\frac{y}{b}=1=\frac{cx}{a^2}+\frac{cy}{b^2}.$$

11. Solve the equations:

(i) $(x-1)^2-4=0$;

(ii) $$\frac{10}{x-1}+\frac{20}{x-2}=\frac{21}{x-3}.$$

12. Two trains A and B start simultaneously from opposite ends of a railway 140 miles in length, and travel with uniform speed. They pass after A has travelled 60 miles, and A takes 70 minutes longer than B to do the whole journey; find the speed of each train.

C.

13. Prove that the angles at the base of an isosceles triangle are equal.

AX and BY are parallel straight lines. If D and C be points in AX and BY respectively such that DB bisects the angle ABY and CA bisects the angle BAX, show that $ABCD$ is a rhombus.

14. State in order the fundamental propositions regarding

parallels; and prove the one in which the parallel-axiom is first used.

Given a point P, and two parallel straight lines X and Y, to draw through P a straight line L, such that the portion of L intercepted between X and Y is of given length. Indicate how many solutions there are in general; and when there is none.

15. Find the locus of a point whose distances from two given points are equal.

Show how to find a point whose distances from two given points are equal, and whose distances from two given parallel straight lines are also equal.

16. Show that the square on a side of a triangle opposite to an acute angle is less than the sum of the squares on the sides containing that angle by twice the rectangle contained by either of these sides and the projection on it of the other.

$ABCD$ is a quadrilateral, and E and F are the feet of the perpendiculars from the vertices A and C on the diagonal BD. Show that the difference between the sum of the squares on AD and BC and the sum of the squares on AB and CD is twice the rectangle $BD \cdot EF$.

17. Show that all the angles in the same segment of a circle are equal.

Prove that, if equal chords subtend equal angles in two given circles, then the circles are equal.

MONDAY, *3rd April* 1899.—2 *to* 5 P.M.

A.

1. State and justify the rule for converting a vulgar into a decimal fraction. When does the decimal corresponding to a given vulgar fraction terminate?

Express $(2\frac{1}{2}-\frac{3}{4})\div(1-\frac{5}{8})+(\frac{3}{16}-\frac{1}{7})\times\frac{28}{55}$ as a decimal, correct to the fourth place of decimals.

2. Find to the nearest penny the amount of the following bill:—

6·63 tons of coal at £·76 per ton.;
3·14 lbs. of tea at £·31 per lb.

3. A man invests £3856, 10s. 11d. in a certain company so as to get 3 per cent. of interest on his investment. Before paying the interest the company deducts income tax at 6d. per £. What is the man's net income from the investment?

4. If the cost of painting the walls and ceiling of a rectangular room, 13 ft. 6 in. long, 11 ft. 3 in. broad, and 12 ft. high, be £6, what will be the cost of painting in the same way a rectangular room 14 ft. long, 13 ft. broad, and 13 ft. high?

5. If 23 oz. of a 53·2 per cent. solution of a certain salt be mixed with 20 oz. of a 35·32 per cent. solution of the same salt, calculate to the second place of decimals the percentage of salt in the mixture.

B.

6. If m and n be positive integral numbers, prove from first principles that $(x^m)^n = x^{mn}$.

Simplify $\dfrac{(3^2 \cdot 2^3 x^2)^4 \times (27x^3)^3 \times 6x^2}{(8x^4)^2 \times (27x^3)^2 \times 3x}$.

7. Factorise the following:

(i) $(x+1)^2 - 8(x+1) + 15$;

(ii) $(x-a)^2(x^2-bx-cx+bc)+(x-b)^2(x^2-cx-ax+ca)$
$+(x-c)^2(x^2-ax-bx+ab)$.

8. Simplify the following rational functions of x:

(i) $\dfrac{3x^3-8x^2+4x+1}{x^2-3x+2} - \dfrac{2x^3-7x^2+5x+2}{x^2-4x+4}$;

(ii) $\left\{\dfrac{x^3-a^3}{x^2-a^2}+\dfrac{x^3+a^3}{(x+a)^2}\right\} \times \left\{\dfrac{x}{2}-\dfrac{a^2}{2x}\right\} \div \left\{x+a+\dfrac{3a^2}{x-a}\right\}$.

9. Solve the following:

(i) $6\left\{1-\dfrac{2x-1}{2x+1}\right\} = \dfrac{10x+7}{2x+1}$.

(ii) $\begin{cases} \left(1-\frac{1}{x}\right)\left(1-\frac{6}{y}\right)=1, \\ \left(1-\frac{1}{x+y}\right)\left(1+\frac{2}{x-y}\right)=1. \end{cases}$

10. Express the sum and the product of the roots of the equation $x^2+px+q=0$ in terms of p and q.

Solve the following:

(i) $(3x-1)^2=4x^2+4x+1$;

(ii) $\begin{cases} x+2y-1=0, \\ (x+2y)^2+(x-2y)^2=10. \end{cases}$

11. $ABCD$ is a rectangle, and P and Q are points in AB at which CD subtends a right angle. If AB be 18 inches, and BC 8 inches, find the distance between P and Q.

C.

12. Prove that two triangles are congruent (*i.e.* equal in every respect) when three sides of the one are respectively equal to three sides of the other.

Show how to construct a triangle when two sides and the perpendicular from the vertex on the base are given. Has the problem more than one solution?

13. Show that the diagonals of a rhombus are perpendicular and bisect the angles of the figure.

When one side of a rhombus is given in magnitude and position, what is the locus of the intersection of its diagonals?

14. Show that the opposite angles of a quadrilateral inscribed in a circle (cyclic quadrilateral) are supplementary.

If a trapezium be cyclic, show that it is isosceles, and that its area is expressed in terms of its sides by the formula

$$\tfrac{1}{2}(b+c)\sqrt{\{a^2-\tfrac{1}{4}(b-c)^2\}},$$

b and c being the lengths of the parallel sides.

15. Show that four circles can in general be described so as

to touch three given straight lines. Discuss the case where two of the lines are parallel.

If in a right-angled triangle the sides containing the right angle are 5 and 12 inches respectively, find the length of the radius of the inscribed circle.

16. Prove that parallelograms, and also triangles, on the same base and between the same parallels are equal in area.

L and M are two given parallel straight lines, and P and Q two given points. Show how to draw through P and Q respectively, a pair of parallels which form with L and M a parallelogram of given area. Under what circumstances is this problem impossible?

FRENCH.—FIRST PAPER.

TUESDAY, *4th October* 1898.—3 *to* 4.30 P.M

Translate into French :—

(*a*) Everything that could stimulate, and everything that could gratify the strongest propensities of our nature, the gaze of a hundred drawing-rooms, the acclamations of the whole nation, the applause of applauded men, the love of lovely women, all this world and all the glory of it were at once offered to a youth to whom nature had given violent passions, and whom education had never taught to control them. He lived as many men live who have no similar excuse to plead for their faults. But his countrymen and his countrywomen would love him and admire him. They were resolved to see in his excesses only the flash and outbreak of that same fiery mind which glowed in his poetry. He attacked religion; yet in religious circles his name was mentioned with fondness, and in many religious publications his works were censured with singular tenderness. He lampooned the Prince Regent; yet he could not alienate the Tories. Everything, it seemed, was to be forgiven to youth, rank, and genius. MACAULAY.

(*b*) 1. It is impossible to make any one believe that story.
2. When did you see him last? I think it was last month.
3. He knows no language but his own.
4. A friend of mine has just left for China.
5. When I first came to London I was only fifteen.

SECOND PAPER.

THURSDAY, 6*th October* 1898.—3 *to* 5 P.M.

I. Translate into English :—

(*a*) Ce souvenir m'est encore présent et depuis cette époque de premier travail il ne m'arriva jamais d'avoir une perception aussi vive des personnages de mon drame, de ces hommes . . . qui successivement se présentaient à mon esprit, les uns chantant sur la harpe celtique l'éternelle attente du retour d'Arthur, les autres naviguant dans la tempête avec aussi peu de souci d'eux-mêmes que le cygne qui se joue sur un lac ; d'autres, dans l'ivresse de la victoire, amoncelant les dépouilles des vaincus, mesurant la terre pour en faire le partage et comptant et recomptant par têtes les familles comme le bétail, d'autres enfin, privés par une seule défaite de tout ce qui fait que la vie vaut quelque chose, se résignant à voir l'étranger assis en maitre à leurs propres foyers, ou, frénétiques de désespoir, courant à la forêt pour y vivre comme vivent les loups, de rapine, de meurtre et d'indépendance.—AUGUSTIN THIERRY.

LA SOURCE.

(*b*) Tout près du lac filtre une source
Entre deux pierres, dans un coin,
Allègrement l'eau prend sa course
Comme pour s'en aller bien loin.

Elle murmure : "Oh ! quelle joie !
Sous la terre il faisait si noir !
Maintenant ma rive verdoie,
Le ciel se mire à mon miroir.

. . . . .

A ma coupe l'oiseau s'abreuve.
Qui sait, après quelques détours
Peut-être deviendrai-je un fleuve
Baignant vallons, rochers et tours.

Je broderai de mon écume
Ponts de pierre, quais de granit,
Emportant le vaisseau qui fume
A l'océan où tout finit."

Ainsi la jeune source jase
Formant cent projets d'avenir ;
Comme l'eau qui bout dans un vase,
Son flot ne peut se contenir ;

Mais le berceau touche à la tombe,
Le géant futur meurt petit ;
Née à peine, la source tombe
Dans le grand lac qui l'engloutit.

II. Grammar.

1. Form short sentences to illustrate the construction or constructions admitted by the undernoted verbs when followed by an infinitive with or without a preposition : *venir*, *espérer*, *réussir*, *commencer*, *oublier*. Give the English of these sentences.

2. Translate into French :—

(*a*) For three hours he remained standing at the gate.

(*b*) He ran away for fear of the consequences of his misdeed.

(*c*) He died fighting for his country.

(*d*) The sun set early, for it was winter.

3. Translate the following sentences into English, and explain the use of the subjunctive in each case :—

(*a*) C'est l'homme le plus fier que je connaisse.

(*b*) Je désire un livre qui m'apprenne quelque chose.

(*c*) Il n'y a personne qui ne puisse faire cela.

(*d*) Si vous venez me voir et que je sois sorti.

Distinguish between the usage of *c'est* and *il est* used before an adjective. Form illustrative sentences.

III. Philology and Literature.

(*Only* one *question to be attempted.*)

1. Write a short account of the life, and mention and characterise briefly the principal works, of Prosper Mérimée, *or* Mignet.

2. Give a short account of any comedy of De Musset *or* a novel of George Sand which you may have read.

3. Give the etymology, with some comments, of the following words : *il, le, lui, en, y, même, leur, désormais, alors, encore.*

4. Give the corresponding popular form (*mot populaire*) of *any ten* of the following learned forms (*mots savants*), viz. : *ministère, tradition, blasphème, féroce, friction, examen, légal, direct, cause, rigide, doter, liguer, charité, hôpital, ration.*

First Paper.

Tuesday, *4th April* 1899.—3 *to* 4.30 p.m.

Translate into French :—

(*a*) But the fate of Europe was changed by the genius of Marlborough. Concealing his plans from all but Godolphin and his wife, he induced the Dutch to let their forces accompany him for a campaign, as they thought on the Moselle ; then boldly leaving the French garrisons in his rear, he made a forced march to the Danube, destroyed a Bavarian army in a severe

battle at Donauwerth, and joined the emperor's general, Prince Eugène of Savoy. On 13th August, 1704, they fell upon the French and Bavarians at the village of Blenheim on the left bank of the Danube, and overthrew them utterly. This was one of the decisive battles of the world; it prevented the destruction of the Austrian power, the probable invasion of England, and the possible restoration of James II., and it set a limit, once for all, to French supremacy on the Continent until the time of Napoleon.

(*b*) 1. He was always thinking of it and speaking of it.
2. I was afraid that he would not arrive in time.
3. Whatever he undertakes, he does thoroughly well.
4. You should not have repeated what was told you in confidence.
5. Have you succeeded in getting what you wanted?

SECOND PAPER.

THURSDAY, 6*th April* 1899.—3 *to* 5 P.M.

I. Translate into English :—

(*a*) L'Espagne renonce au travail considéré comme œuvre servile; son idéal est la vie oisive du seigneur et du prêtre. L'industrie est méprisée; le commerce jeté comme un os à ronger aux Juifs convertis et aux étrangers; l'agriculture est anéantie par la double main morte du clergé et de la Grandesse. Le pauvre mendie fièrement; le riche vit à la mode arabe, d'un trésor qui croupit dans un coffre ou dans un silo. Au rude labeur de la charrue les paysans préfèrent la fainéantise pastorale. Le chevrier ne croit pas déroger en gardant ses bêtes: immobile, drapé dans sa loque il est l'*hidalgo* de la Sierra, le gentilhomme de la solitude.—C'est pourquoi la vaine pâture envahit et sèche la campagne: on se croirait en Chaldée aux temps des Patriarches. L'Estramadure tout entière est livrée

aux mérinos; les pâtres du marquis de Gebraleon gouvernent à eux seuls un troupeau de huit cent mille moutons.

(*b*) *La Misère.*

Mon dos n'est point courbé par ma lourde misère;
Tranquille et souriant, je cours au lendemain,
Sous mes pieds dédaigneux soulevant la poussière
Et fêtant nuit et jour l'insomnie et la faim.

Je regarde passer sans regret ni colère
Les heures sans amour et les heures sans pain;
Je marche le front haut dans ma pauvreté fière,
Berçant mes maux cuisants par un rêve divin.

Je me ris de la mort et je siffle la vie;
Et lorsque le hasard, ce dieu lâche et moqueur,
Par des malheurs nouveaux veut m'entamer le cœur,

L'espérance descend dans mon âme ravie;
Et, l'œil au ciel, j'attends, muet, quoique blessé,
J'attends le jour tardif qui venge le passé.

II. Grammar.

1. Form short sentences to illustrate the difference between *celui*, *ceci*, *quelque* (adjective), *quelque* (adverb).

2. Translate the following sentences into English:—

Il vint me parler.
Il vint pour me parler.
Il venait de me parler.
Il en vint à me parler.

3. Translate the following sentences into English, and explain in each case the use of the respective mood: (*a*) J'entends que vous le punissez; (*b*) j'entends que vous le punissiez; (*c*) vous verrez qu'il fera son devoir; (*d*) vous verrez à ce qu'il fasse son devoir.

4. Translate into French: (*a*) he is right; (*b*) the right answer; (*c*) his right hand; (*d*) come with us! all right!

5. Compose four short sentences, beginning with : *à moins que ; quelle que ; quoique ; quoi que.* Give also the English translation of your sentences.

III. Philology and Literature.

(*Only* one *question to be attempted.*)

1. Explain etymologically the meaning of *any ten* of the following words : *affront, emportement, gêne, ennui, partir, charme, nonchalant, malheureux, lâche, entêté, étonné, vilain, boucher, chez, lunette.*

2. Say what has become in French (*a*) of the Latin neuter gender ; (*b*) of the Latin perfect and pluperfect tenses.

3. The literary importance of Corneille's *Le Cid.* Briefly describe the contents.

4. Describe the character of two of the principal personages of any one of Molière's plays you may have read.

GERMAN—first paper.

Wednesday, *5th October* 1898.—3 *to* 4.30 p.m.

(*Candidates may use either English or German script.*)

Translate into German :—

(*a*) The relations between the King and his son became every day worse. At last Frederick could bear the harsh treatment no longer, and resolved to flee to England. A journey to the Rhine on which he had to accompany his father seemed to offer the wished-for opportunity for carrying out his intention. But the plan was accidentally betrayed to the King at the last hour. A letter from the Prince to his friend Lieutenant von Katte was insufficiently addressed and fell into the hands of the King, who learnt therefrom what was to happen. The King's fury was terrible. He caused his son at once to be taken on board a ship and treated as a prisoner. At Wesel he had him brought before

him, called him a cowardly deserter, and even drew his sword against him. But General Mosel placed himself between them, held back the King's arm, and called out, "Kill me, sire, but spare your son!" The unfortunate youth was then taken as a prisoner to the fortress of Küstrin, and from his window there he saw his friend Katte being led to his execution.

(*b*) 1. You know that you ought to have written to him.
2. I remember seeing him some weeks ago.
3. Answer my letter by return of post.
4. Must you always be told the same thing over and over again?
5. He was very much pleased with his present.

SECOND PAPER.

FRIDAY, *7th October* 1898.—9 *to* 11 A.M.

I. Translate into English:—

(*a*) Ziemlich weit draußen in einer langen Straße der Hafenstadt N. stand ein niedriges Häuschen; man sah nichts Besonderes daran, und doch war's eine Curiosität, und die ringsum wohnende Jugend hätte viel darum gegeben, einmal da hineinzukommen und all die Herrlichkeiten, mit denen das weiße Häuschen vollgestopft sein sollte, zu besichtigen. Aber der Besitzer, Kapitän Leupold, war ein Sonderling und gönnte nur wenigen Bevorzugten den Eintritt.

Die Straße, in der sich das Haus befand, hieß die Schiffstraße und es wohnten dort zumeist Leute, die irgend etwas mit der See zu schaffen gehabt oder noch zu schaffen hatten. Jeder Einwohner der schmalen Gasse kannte den alten Leupold, und man sah ihm lächelnd nach, wenn er tagaus tagein, bei Wind und Wetter, um die zehnte Morgenstunde zum Hafen hinunterging mit seinem wiegenden Schritt, die Hände tief in die weiten Taschen seines blauen Rockes vergraben, die Seemannsmütze mit dem Anker hinten übergesetzt,

einen gelegentlichen Gruß nur mit einem Augenzwinkern und einem knurrenden Laut erwidernd. Er galt für wohlhabend, hatte sein eigenes Segelboot unten im Hafen, mit dem er oft stundenlang auf hoher See war, und man wunderte sich allgemein, daß er sich schon zur Ruhe gesetzt hatte, denn er stand noch in guten Jahren.

MARIE BERNHARD.

(*b*) Scheint in langen Winterwochen,
Trostlos die Natur erschlafft,
Unterm Eise ungebrochen
Schlummert ihre Lebenskraft;
Und hält Siechtum dich umfangen,
So daß all dein Wünschen ruht,
Wieder färben sich die Wangen:
Habe Mut!

Jeder Lenz hat seine Blüten
Die kein Sturm ihm knickt und bricht,
In des ärgsten Winters Wüten
Strahlt der Sonne mildes Licht.
Was des Jahres Lauf auch bringe,
Wechselnd steigt und fällt die Flut;
Stehe mannhaft, hoffe, ringe —
Habe Mut!

II. GRAMMAR.

1. Give four verbs after which the infinitive without zu is used, and form short illustrative sentences.

(NOTE.—*The auxiliary verbs of mood will not be accepted.*)

2. Form short sentences to show how the following words when beginning a clause affect the construction: damit, wofern, dann, denn, allein.

3. Give the second person singular of the imperfect subjunctive, and the second person singular of the imperative of: aufstehen, sich retten, besehen, vergessen, loslassen.

4. Translate into German:—A man came running; either brother; neither of us; the art of writing; Thursday next.

III. Philology and Literature.

(*Only* one *question to be attempted.*)

1. From ſehen and gehen form ten compound verbs with any prefixes you like (twenty words in all), and give the English meaning of each.

2. Mention the different ways in which length of vowel is indicated in German spelling. Treat this question as far as possible historically, and illustrate by examples.

3. State what you know of Jean Paul *or* Grillparzer *or* Tieck.

4. (*a*) Assign *any five* of the following works to their writers, and write a short literary note on each; *or* (*b*) give a full description and a short literary criticism of *any two* of the first six of the following works:—"Die Flegeljahre," "Des Sängers Fluch," "Reisebilder," "Die Ahnfrau," "Peter Schlemihl," "Der blinde König," "Tannhäuser," "Das Schloss am Meere," "Des Knaben Wunderhorn," "Sappho," "Der arme Spielmann," "Die unsichtbare Loge."

GERMAN—first paper.

Wednesday, *5th April* 1899.—3 *to* 4.30 p.m.

Candidates may use either German or English script.

Translate into German:—

(*a*) "But yet," the Admiral de Vienne said, "if you do not fight, what do you mean to do? If you do not oppose this great force, the English will destroy your country."

"Let them do their worst," said Douglas, smiling; "they will find but little to destroy. Our people are all retired into the woods and hills, and have driven off their cattle, which is their only property, along with them. The English will find nothing

either to take away or to eat. The houses of the gentlemen are small towers, with thick walls, which even fire will not destroy; as for the common people, they dwell in mere huts, and if the English choose to burn them, a few trees from the wood is all that is necessary to build them up again."

"But what will you do with your army if you do not fight?" said the Frenchman; "and how will your people endure the distress, and the famine, and plunder, which must be the consequence of the invasion?"

"You shall soon see that our army will not be idle," said Douglas.

(*b*) (1) Come here, when you are called!
(2) Do you know where he is going?
(3) I wish he had not gone away so soon.
(4) At all events let us hope for the best.
(5) I believe you could have chosen something better.

SECOND PAPER.

FRIDAY, *7th April* 1899.—9 *to* 11 A.M.

I. Translate into English:—

(*a*) Indeſſen waren wir in den Hintergrund der Grotte gekommen, und das Schauſpiel, welches ſich nun unſeren Augen bot, war ganz neu und von unbeſchreiblicher Anmut. Die Grotte war nämlich, da die Abendſonne an den Eingang ſchien, weit mehr erhellt als an jenem Morgen, und ihre vielzackige Wölbung zeigte ſich in voller Farbenpracht, wo ſie heller war, leicht geſpiegelt von dem himmelklaren Waſſer. Ich ließ die Ruder einziehen; da ruhte das liebliche Element beinahe völlig, und man hätte es für den blauen Himmel ſelbſt anſehen können, wären nicht bald hier bald da ſilberne Tropfen von der Decke herabgefallen, die es mit einem anmutigen Spiele von wallenden Ringen ſchmückten. In dieſes melodiſche Geträufel ſtöhnte dann und wann, wie eine atmende

Menſchenbruſt, die leiſe Brandung, erſt außerhalb, dann innerhalb der Grotte. Ich ſah nun auch Scharen von kleinen Fiſchchen, die, obwohl ſie ſonſt bunt wie Kolibris erſcheinen, hier wie ſchwarze Schwalben in dem Himmel unter mir herumflogen.

(*b*)

Nachtlied.

Auf Berg und Thal liegt ſtumm die Nacht,
Und lautlos ſchweiget die Runde,
Tief unten im Dorf nur ſacht, ganz ſacht
Bellen verſchlafen die Hunde.

Es ziehen die Wolken, es rauſcht der Wald,
Und murmelnd leiſe, leiſe
Singt tief der Bach im Felſenſpalt
Die traumhaft alte Weiſe.

In Lüften hallt es wie Sphärengeſang,
Es leuchtet im Waldesgrunde,
Die Kirchturmuhr mit dröhnendem Klang
Kündet die Geiſterſtunde.

Ein Hauchen und Flüſtern überall,
Mich treibt es zu lauſchen, zu lauſchen,
Mir iſt's als hört ich vernehmbar im All
Die Ströme des Lebens rauſchen.

II. Grammar.

1. Give the German verbs and prepositions for the English: believe in, laugh at, wait for, think of, aim at. Form one short sentence with each of these expressions.

2. Form short sentences beginning with the following words, and add the English translation of these sentences: vergebens, übrigens, obſchon, kaum, unterdeſſen.

3. What different parts of the verb may be used to express command? Illustrate with the verb aufſtehen.

4. Write the third person singular of the present indicative and the past participle of: ſich verſehen, bemitleiden, vorziehen, auftragen, unterlaſſen.

III. Philology and Literature.

(*Only* one *question to be attempted.*)

1. Explain philologically: (*a*) the suffix in viertel; (*b*) the forms er will, er darf (without the inflective t); (*c*) the uninflected forms of the possessive adjectives, masc. and neuter.

2. Give the English meaning of: erſetzen, beſetzen, verſetzen, zerſetzen, überſetzen (two meanings), bereiſen, verreiſen (two meanings), trinken, tränken, verſchlafen.

3. The national sentiment in the works of Klopstock, Lessing, Voss.

4. Name the authors of, and write a short literary note on, the following works:—Die Stimmen der Völker; das Lied vom braven Manne; Oberon.

ITALIAN—first paper.

Friday, 30*th September* 1898.—2 *to* 3.30 p.m.

Translate into Italian:—

(*a*) I am at length in Cadiz. I came across the bay yesterday morning in an open boat from Santa Maria, and have established myself in very pleasant rooms which look out upon the public square of the city. The morning sun awakes me, and at evening the sea breeze comes in at my window. At night the square is lighted by lamps suspended from the trees, and thronged with a brilliant crowd of the young and gay. Cadiz is beautiful almost beyond imagination. The cities of our dreams are not more enchanting. It lies like a delicate sea-shell upon the brink of ocean, so wondrous fair that it seems not formed for man. In

sooth the Paphian queen, born of the feathery sea-foam, dwells here. It is the city of beauty and of love.

(*b*) 1. He has promised to write me as soon as he arrives in London.

2. Please choose a seat from which you can get out when you wish.

3. After waiting for two hours I returned home.

4. They would have been more careful if they had been warned.

5. Give him some : give them some.

6. What 's the matter ? What has happened ?

SECOND PAPER.

FRIDAY, 30*th September* 1898.—3.30 *to* 5.30 P.M.

I. Translate into English :—

(*a*) Nè cessarono i disastri della natura. Potendo la cenere adunata sopra i tetti e i terrazzi rovinar col peso gli edifizii, il magistro della città bandì che si sgomberasse, e più del comando valendo il pericolo, subito dall' alto si gettavano quelle materie su le strade oscurando vieppiù e bruttando il paese. Non si vide, si udì giunger la notte da' consuetti tochi della campana ; ma dopo alcune ore si addensarono tenebre così piene come in un luogo chiuso ; nè la città era in quel tempo illuminata da lampadi, e i cittadini intimoriti da tremoti, non osando ripararsi nelle case, stavano dolenti per le strade o piazze ad aspettare l' abisso estremo. Al dì vegnente, che fu il terzo, scemò la oscurità ma per luce sì scarsa, che il sole appariva come al tramonto, pallido e fosco ; diradarono le piovo delle ceneri, cessò il fuoco ed il tuono del volcano. COLLETTA.

(*b*) Profonda solitaria immensa notte ;
Visibil sonno del divin creato
Su le montagne già dal fulmin rotte,
Su le terre che l' uomo ha seminato ;

Alte da i casti lumi ombre interrotte;
Cielo vasto, pacifico, stellato;
Lucide forme belle, al vostro fato,
Equabilmente, arcanamente, addotte;

Luna e tu che i sereni e freddi argenti
Antica peregrina a i petti mesti
Ed a' lieti dispensi indifferenti:

Che misteri, che orror, dite, son questi?
Che siam, povera razza de i viventi? . . .
Ma tu, bruta quiete, immobil resti.

CARDUCCI.

II.—GRAMMAR.

1. Distinguish: i legni, legna; le i membri, le membra; i corni, le corna.

2. Parse: Seppe, moiano, crebbe, scelto, sciolto, stemmo, varrà, ponga.

3. What is the force of the suffix in: medicastro, bastoncione, bastoncino, tavolone, giovanotto?

4. Translate into Italian: *a wine bottle, a bottle of wine, it is said that he is ill, on the other side of the river, before doing it, I met him five years ago, a friend of mine.*

III.—PHILOLOGY AND LITERATURE.

(*Only* ONE *question to be attempted.*)

1. Explain shortly the influence of Italian on early English Literature.

2. Write a brief sketch of Leopardi and his works.

3. Explain philologically these forms: uccello, chiudere, ancora, viaggio, smontare, niente.

4. Mention six English words adopted from the Italian, and explain how they came to be adopted.

FIRST PAPER.

FRIDAY, 31*st March* 1899.—12 NOON *to* 1.30 P.M.

Translate into Italian :—

(*a*) If I had been sent for here to be asked to give an account of what happened in the last battle where I was in command, I am ready to inform you, but if it is only a pretext to kill me, as I suspect it is, spare me useless words. Here is my body and my life, which I give up to you : you may dispose of them. What then is my crime ? I am charged with having lost too many men in the last fight. But what general is there who can fight battles against a warlike nation, that defends itself bravely, without blood being shed on both sides ? What deity has pledged itself on behalf of the Roman people to make them gain victories without any loss ? Whom will you make believe that glory can be gained otherwise than by great perils ?

(*b*) (1) Do not believe all he may say.
(2) Having told him all, he asked to be forgiven.
(3) He was able to escape without anybody touching him.
(4) I wish you had not treated him as you did.
(5) I wonder what has become of him.

SECOND PAPER.

FRIDAY, 31*st March* 1899.—3 *to* 5 P.M.

I. Translate into English :—

(*a*) Alla prima scossa nessun segnale in terra o in cielo dava timore o sospetto ; ma nel moto ed alla vista de' precipizi, lo sbalordimento invase tutti gli animi, così che smarrita la ragione, e per fino sospeso l'instinto di salvezza, restarono gli uomini attoniti ed immoti. Ritornata la ragione, fu primo sentimento

de' campati certa gioia di parziale ventura, una gioia fugace, perchè subito la oppresse il pensiero della famiglia perduta, della casa distrutta, e fra tante specie presenti di morire, il timore di giorno estremo e vicino; più gli straziava il sospetto che i parenti stessero ancora vivi sotto le rovine, sì che, vista l'impossibilità di soccorerli, dovevano sperare che fossero estinti. Quanti si vedevano padri e mariti aggirarsi fra' rottami che coprivano le care persone, non bastare a muovere quelle moli, cercare invano aiuto ai passegieri; e alfine disperati gemere dì e notte sopra que' sassi. Nel qual abandono de' mortali, rifuggendo alla fede, votarono sacre offerte alla divinità, e vita futura di contrizione ed di penitenza.

(*b*) Grossi, ho trentacinque anni, e m'è passata
Quasi di testa ogni corbelleria;
O se vi resta un grano di pazzia
Da quel che pelo bianco è temperata.

Mi comincia un' età meno agitata,
Di mezza prosa et mezza poesia;
Età di studio e d'onesta allegria
Parte nel mondo e parte ritirata.

Poi, calando giù giù di questo passo
E seguitando a corbellar la fiera,
Verrà la morte, e finiremo il chiasso.

E buon per me, se la mia vita intera
Mi frutterà di meritare un sasso
Che porti scritto: "Non mutò bandiera."

II.—Grammar.

1. Give the plural forms with the English translations of: *braccio, corno, ósso, muro, pugno.*

2. Write the 1st person plural of the present indicative and of the past definite of: *dire, parere, porre, stare, bére.*

3. Write down the different forms of the imperative of *levarse.*

4. Distinguish between: *questo, quello, ciò, il quale, colúi.*

III.—Philology and Literature.

(*Only* one *question to be attempted.*)

1. Explain the change of vowels in the present indicative of: *venire, volére.*

2. Give the Latin derivation of: *gli, loro, esso, stesso, questo, quello, ognuno, niente, insieme, vecchio.*

3. Italian Comedy in the eighteenth century.

4. Describe any one of the following works: *La Gerusalemme liberata; L'Orlando furioso; I Promessi Sposi.*

SANSKRIT.

Saturday, 1*st April* 1899.—3 *to* 6 p.m.

I. Translate into English:—

(*a*) *Nala*, II., 16-21.

(*b*) *Do.*, V., 25-27; 29-31.

II. 1. Nom. and dat. singular, nom. and acc. plural of *sīman* (f.), *rūpavat* (m.n.), *ātman* (m.); and of the present participle parasm. (masc.) of *nī* (1st).

2. Instr., gen., loc. singular of *kavi* (m.), *jāti* (f.), *devī* (f.), *bhū* (f.), *pati* (m.).

3. Abl., gen. singular and plural of *bhrātṛi* (m.), *aśva* (m.), *mālā* (f.), *tat* (m.f.n.).

4. Third sing. and plur. imperfect parasmaipada of *gam* (1st), *sthā* (1st), *sic* (6th), *bhuj* (7th), *ci* (5th).

5. Third singular optative parasmaipada and ātmanepada of *diś* (6th), *dvish* (2nd).

6. Third sing. and plur. perfect parasmaipada of *diś, budh, gam, vac, bhū, kṛi; kath* (10th).

7. Third sing. parasmaipada future (in *-sya*), and aorist of *dhā*, *bhū*, *sic* (*a*-aor.), *ji* (*s*-aor. without *i*).

8. Infinitive and past participle of *yuj*, *nī*, *vac*, *dhā*, *viś*, *bhid*.

III. Translate into Sanskrit:—

1. The king of the Videhas conquered the enemy's cities and villages by the sword.

2. The children saw monkeys and fruits on the trees in Vishṇu's garden.

3. The fool did not remember his friend's word, and went home.

4. The rays (*raśmi*) of the sun burn the grain and the grass in Hari's fields.

DYNAMICS.

FRIDAY, *7th October* 1898.—1 *to* 4 P.M.

(Candidates may obtain FULL *marks by doing about two-thirds of this paper.)*

1. What is meant by saying that a point has two simultaneous velocities, and how may the actual velocity be found when the simultaneous velocities are known?

If a point have two equal velocities in directions which include an angle of 60°, what will be the magnitude of these velocities if the actual velocity be 24 feet per second?

2. Define *acceleration*. What is meant by saying that an acceleration is 32, the units being the foot and the second; and what would the acceleration be if the units were the yard and the minute?

A particle starts from rest, and moves in a straight line with constant acceleration. If in the first minute it goes 30 feet, how far will it be from the starting point when its speed is 2 feet per second?

3. State the Second Law of Motion.

A mass of 10 lbs. moves in a straight line under the action of

a force equal to its own weight; find the momentum produced in half a minute.

4. Define *work* and *kinetic energy*, and state how they are measured.

A body, whose mass is 10 lbs. moving at 50 feet per second, enters a medium in which it experiences a constant resistance equal to $\frac{1}{20}$th of its weight; how far does it go before being brought to rest?

5. Describe Atwood's machine, and show how by means of it an approximation of the value of g may be obtained.

Show that when a mass falls vertically, dragging another along a smooth horizontal table, the tension in the string is half what it is in Atwood's machine for the same masses.

6. A body is projected horizontally from a point above a horizontal plane; show that the time it takes to reach the plane is independent of the speed of projection.

Find where the body will strike the plane, if the point of projection be 100 feet above the plane, and the speed of projection 30 feet per second.

7. If three coplanar forces keep a body at rest, what conditions must they satisfy?

If one point of the body is fixed, what are the conditions of equilibrium?

A smooth rod, 26 inches long, can rotate freely in a vertical plane about a fixed hinge at one end; the other end rests on a smooth vertical wall, 16 inches distant from the hinge. Draw a diagram showing the forces acting on the rod, and show that the reactions of the hinge and wall are in the ratio of 11 to 4.

8. Define the *moment* of a force about a point, and show that the algebraic sum of the moments of two forces about any point is equal to the moment of their resultant about the same point.

ABC is a triangle having a right angle at C; BC is 12 feet

and CA 20 feet. If a force of 50 lbs. act from C to B, and one of 100 lbs. from C to A, find the algebraic sum of their moments about P, the middle point of AB. If P were fixed, in what direction would the triangle revolve?

9. Mention any one property of the centre of gravity of a body. State where the centre of gravity is situated (1) in a square lamina, (2) in a solid cylinder with ends perpendicular to the axis.

Find the position of the centre of gravity of three equal masses placed at the vertices of a triangle.

10. State the laws of static friction.

A mass of 14 lbs. rests on a rough plane inclined at 45° to the horizon; find what force acting up the plane is needed to support the mass, the coefficient of friction being $\frac{1}{2}$.

11. Define a *couple*, and find the condition that two couples in the same plane should be in equilibrium.

$ABCD$ is a square of 1 foot side; forces of 8 lbs. act from A to B and from C to D, and forces of 6 lbs. act from A to D and from C to B. Show that these forces can be balanced by a couple, and find its moment.

12. If a body is immersed in water, what is the magnitude of the resultant fluid pressure on it, and in what direction and along what line does the resultant act?

A body weighing 12 lbs., and having a specific gravity ·75, is fastened by a thread to the bottom of a vessel; when water is poured in so that the body is completely immersed, find the position the thread will take up, and calculate its tension.

13. How is the pressure at a point within a fluid measured? State a rule for finding the whole pressure exerted by a fluid on a plane area immersed in it.

A tank, 4 feet long and 4 feet broad, has a sloping bottom, being 3 feet deep at front and 6 feet at back. Find the pressure on the front side and on the base when the tank is filled with water.

14. How is the specific gravity of a mixture found, the specific gravities and the volumes of the components being known, and there being no change of volume?

Equal volumes of two fluids, whose specific gravities are 1 and 1·7, contract when mixed by $\frac{1}{10}$th of their original volume, find the specific gravity of the mixture.

15. Describe briefly and explain the action of the common force pump. When the piston is lifted why does the water follow it?

If the piston has a cross section of 3 square inches, and works 60 feet below the cistern, with what pressure must it be pushed down in order to force water into the cistern?

FRIDAY, *7th April* 1899.—1 *to* 4 P.M.

(*Candidates may obtain* FULL *marks by doing about two-thirds of this Paper.*)

1. Define *the relative velocity* of two moving points, and give a geometrical construction for determining the relative velocity when the absolute velocity of each of the two points is known.

A man, 6 feet high, is walking at the rate of 4 miles an hour directly away from a lamp post 10 feet high. Find the speed of the end of his shadow, and the rate at which the length of the shadow increases.

2. Define *acceleration*. A point moves in a straight line, starting with velocity u and moving with constant acceleration f in its direction of motion: if v be its velocity at the end of time, t when it has moved through a distance s, prove that

$$\text{(i) } v=u+ft, \qquad \text{(ii) } s=ut+\tfrac{1}{2}ft^2.$$

A point moving in a straight line passes over 7 feet in the first second of its motion, and over 11 and 17 feet in the third and sixth seconds respectively. Show that the motion is consistent with the supposition of a uniformly accelerated velocity.

3. When a force acts on a particle which is free to move,

state the relation between the mass of the particle, the acceleration, and the force.

What uniform force acting on a mass of 1 cwt. at rest will make it describe 10 feet in the first second? What speed would this force produce in a mass of 1 ton if acting for 3 seconds?

4. State and illustrate Newton's Third Law of Motion.

Masses of 2 and 6 lb. are connected by a string 24 feet long; at the beginning of their motion the mass of 6 lb. rests 12 feet from the edge of a smooth horizontal platform, and the mass of 2 lb. hangs over the edge and is 4 feet above the ground. Find the acceleration of the masses; find also when the mass of 6 lb. will strike the ground.

5. Define a foot-pound of work and a horse-power.

Mention a case in which a force acting on a body does no work.

The mass of a complete train is 80 tons and the resistance to its motion on a level is 20 lb. per ton. If the highest horse-power of the locomotive be 128, what is the greatest speed at which the locomotive can keep the train moving?

6. Show that if any number of forces acting on a particle in the same plane are in equilibrium, the sum of their components in any direction is zero. Hence establish two necessary and sufficient conditions for the equilibrium of any number of forces acting on a particle in the same plane.

Forces of 10, 12, and 14 lbs. respectively act at a point in directions parallel to the sides of an equilaterial triangle taken in order: find their resultant in magnitude and direction.

7. Define the centre of a system of parallel forces and state a rule for finding it.

Masses of 1, 2, 3, 4 lb. are placed at the corners A, B, C, D respectively of a square $ABCD$: find the distance of the centre of gravity of the four masses from the sides AB, AD. Find

also where a mass of 5 lb. must be placed so that the centre of gravity of the five masses may be at A.

8. Investigate the mechanical advantage of the system of pulleys in which the same rope goes round all the pulleys, the pulleys being smooth and the weight of the lower block being neglected.

If there are three pulleys in the lower block, what pull is necessary just to raise a weight of 1 ton? Find also the power exerted when the rope is pulled out at a speed of 10 feet per second.

9. A body rests on a rough plane inclined at an angle i to the horizon; if μ be the coefficient of friction, and if the body be on the point of slipping, show that $\mu = \tan i$.

A uniform ladder, 10 feet long, rests with one end against a smooth vertical wall and the other on the ground, the coefficient of friction between the ladder and the ground being $\frac{1}{2}$. Find how far up the ladder a man whose weight is four times that of the ladder may ascend before it begins to slip, the foot of the ladder being 6 feet from the wall.

10. Define pressure at a point of a fluid and show that the difference of pressures at two points in a heavy liquid is proportional to the difference of the depths of the two points.

Show that the common surface of two liquids of different densities which do not mix and which are at rest under gravity is a horizontal plane.

11. Define the centre of pressure of a plane area immersed in a liquid. State the position of the centre of pressure of a rectangle with one side in the surface of a liquid.

A cube of one foot edge is filled with water; one side $ABCD$ can move freely about the lower edge CD as a hinge. What force must be applied at the middle point of the diagonal AC at right angles to the side $ABCD$ to keep this side in position?

12. What is the relation between the pressure and the density of a given mass of gas at constant temperature?

A hollow cylinder is full of air at a pressure of 15 lb. per square inch when the piston is 12 inches from the bottom; if more air is forced in till there is three times as much air as at first, and if the piston is allowed to rise 4 inches what will be the pressure of the air, the temperature remaining constant?

13. Describe the common suction pump and explain its action.

One foot of the length of the barrel of the pump holds a gallon of water (10 lb.); at each stroke the piston works through 4 inches; the spout is 24 feet above the surface of the water in the well: how many foot-pounds of work are done per stroke?

Additional Examination Papers for First Year Open Bursaries in Arts.

ENGLISH.

FRIDAY, *30th September* 1898.—9 *to* 12 *o'clock.*

[1 *and* 9 *to be attempted by all. It will be better not to try more than* FIVE *of the others, and not to devote more than three-quarters of an hour to the Essay.*]

1. Write an Essay on *one* of the following subjects:—

(*a*) The English Drama before Shakespeare.

(*b*) The novelists of the eighteenth century.

(*c*) The prosody of Milton.

2. Give a few particulars about each of the following books:—The *Paston Letters*, *Tottel's Miscellany*, *Euphues*, the *Polyolbion*, *Religio Medici*, *Venice Preserved*, *Cato*, *Night Thoughts*, *Rasselas*, *The Task*.

3. Write a somewhat longer critical account of *one* of the

following:—The *Prologue* to the *Canterbury Tales*, *Macbeth*, *Comus*, *Alexander's Feast*, the *Essay on Man*, *The Vanity of Human Wishes.*

4. Give a brief account of the life and writings of *two* of the following:—Dunbar, Marlowe, Ben Jonson, Clarendon, Steele, Lord Chesterfield, Gray, Crabbe.

5. Write notes on the terms:—middle pause, *enjambement*, stopped line, extrametrical syllable, rhyme-letter, anacrusis.

6. What are the chief distinctions which separate Early Middle English from Anglo-Saxon proper?

7. Who were the chief literary contemporaries, in English writing, of Chaucer, *or* of Dryden?

8. Mention, with some of their works and approximate dates, the chief poets between 1798 and 1830.

9. Translate closely into modern English, adding notes where you think necessary:—

(*a*) Hræfen wandrode
sweart and sealobrun, swurdleoma stod
swylce eal Finnsburuh fyrenu wære.

(*b*) Begann þa on mode micclum smeagan, hu he þæs folces lof forfleon mihte: þylæs þe he wurde to plisful on worulde, and þæs heofenlican lofes fremde wære.

(*c*) Æfne þan worden
þer com of se wenden
þat wes an sceort bat liðen
sceonen mid uðen.

(*d*) Þe burne bede bryng his blonk
Whyle þe wlonkest wedes he warp on hym-seluen.

(*e*) And 3if the gomes grucchen, bidde hem go swynke.

(*f*) Leorning-cnicht, acwellan, ærendraca, sunderhalga, ofþunche, makestow.

LATIN.

SATURDAY, *8th October* 1898.—9 *to* 10.30 A.M.

1. Translate into Latin Prose :—

The sensation caused by their arrival was great, as might have been expected. For there were few, even among the most sanguine of their friends, who did not imagine that they had long since fallen victims to the climate or the natives, or miserably perished in a watery grave. It was a moment of proud satisfaction to the three associates, who, in spite of obloquy, derision, and every impediment which the distrust of friends, or the coldness of government could throw in their way, had persevered in their enterprise, until they had established the truth of what had been so generally denounced as a chimera. It is the misfortune of those daring spirits who conceive an idea too vast for their own generation to comprehend, that they pass for visionary dreamers. Such had been the fate of Luque and his associates. But their hour of triumph, their slow and hard-earned triumph, had now arrived.

2. Translate into English :—

Hic erat Arganthi Pege sub vertice montis,
grata domus Nymphis humida Thyniasin ;
quam supra nullae pendebant debita curae
roscida desertis poma sub arboribus,
et circum irriguo surgebant lilia prato
candida purpureis mixta papaveribus.
quae modo decerpens tenero pueriliter ungui
proposito florem praetulit officio,
et modo formosis incumbens nescius undis
errorem blandis tardat imaginibus.
tandem haurire parat demissis flumina palmis
innixus dextro plena trahens umero.

cuius ut accensae Dryades candore puellae
miratae solitos destituere choros,
prolapsum leviter facili traxere liquore:
tum sonitum rapto corpore fecit Hylas.
cui procul Alcides iterat responsa: sed illi
nomen ab extremis fontibus aura refert.

GREEK.

SATURDAY, *8th October* 1898.—10.30 *to* 12 *o'clock.*

I. Translate:—

ΑΘ. εἰ μὲν τοίνυν ὀρθῶς ἢ μή τις ἐπιτιμᾷ τῇ τε Λακωνικῇ καὶ τῇ Κρητικῇ πολιτείᾳ, ὁ λόγος ἂν ἕτερος εἴη· τὰ δ' οὖν λεγόμενα πρὸς τῶν πολλῶν ἴσως ἐγὼ μᾶλλον ἔχοιμ' ἂν ὑμῶν ἀμφοτέρων λέγειν. ὑμῖν μὲν γάρ, εἴπερ καὶ μετρίως κατεσκεύασται τὰ τῶν νόμων, εἰς τῶν καλλίστων ἂν εἴη νόμων μὴ ζητεῖν τῶν νέων μηδένα ἐᾷν, ποῖα καλῶς αὐτῶν ἢ μὴ καλῶς ἔχει, μιᾷ δὲ φωνῇ καὶ ἐξ ἑνὸς στόματος πάντας συμφωνεῖν, ὡς πάντα καλῶς κεῖται θέντων θεῶν, καὶ ἐάν τις ἄλλως λέγῃ, μὴ ἀνέχεσθαι τὸ παράπαν ἀκούοντας· γέρων δὲ εἴ τίς τι ξυννοεῖ τῶν παρ' ὑμῖν, πρὸς ἄρχοντά τε καὶ πρὸς ἡλικιώτην μηδενὸς ἐναντίον νέου ποιεῖσθαι τοὺς τοιούτους λόγους.

ΚΛ. ὀρθότατά γε, ὦ ξένε, λέγεις, καὶ καθάπερ μάντις ἀπὼν τῆς τότε διανοίας τοῦ τιθέντος αὐτὰ νῦν ἐπιεικῶς μοι δοκεῖς ἐστοχάσθαι καὶ σφόδρα ἀληθῆ λέγειν.

ΑΘ. οὐκοῦν ἡμῖν τὰ νῦν ἐρημία μὲν νέων, αὐτοὶ δ' ἕνεκα γήρως ἀφείμεθ' ὑπὸ τοῦ νομοθέτου διαλεγόμενοι περὶ αὐτῶν τούτων μόνοι πρὸς μόνους μηδὲν ἂν πλημμελεῖν;

ΚΛ. ἔστι ταῦτα οὕτως, εἰς ἃ καὶ μηδέν γε ἀνῇς ἐπιτιμῶν τοῖς νόμοις ἡμῶν· οὐ γὰρ τό γε γνῶναί τι τῶν μὴ καλῶν ἄτιμον, ἀλλὰ ἴασιν ἐξ αὐτοῦ συμβαίνει γίγνεσθαι τῷ μὴ φθόνῳ τὰ λεγόμενα ἀλλ' εὐνοίᾳ δεχομένῳ.

ΑΘ. καλῶς· οὐ μὴν ἐπιτιμῶν γε ἐρῶ τοῖς νόμοις πω, πρὶν βεβαίως εἰς δύναμιν διασκέψασθαι, μᾶλλον δὲ ἀπορῶν.

II. For Greek Prose :—

In this epistle he expressed an extreme desire for peace, and a hearty desire to be relieved, if possible, from his most painful situation. He protested, before God and man, that his intentions were most honest, and that he abhorred war more than anything else in the world. He averred that, if his person was as odious to them as it seemed, he was only too ready to leave the land, as soon as the king should appoint his successor. He reminded them that the question of peace or war lay not with himself but with them; and that the world would denounce as guilty those with whom rested the responsibility. He concluded with an observation which, in its humility, seemed sufficiently ironical, that if they had quite finished the perusal of despatches from Madrid to his address, which they had intercepted, he should be thankful for an opportunity of reading them himself.

MATHEMATICS.

SATURDAY, *8th October* 1898.—2 *to* 5 P.M.

1. Shew that the perpendiculars from the vertices on the opposite sides of a triangle are concurrent.

If p, q, r denote the lengths of the three perpendiculars, and α, β, γ the distances of this point of concurrence from the respective vertices, prove that $2(p\alpha+q\beta+r\gamma)=a^2+b^2+c^2$.

2. If P be a point in any geometrical diagram (D), O a fixed point, and P' such that OPP' are collinear and $OP'=\rho OP$, where ρ is constant, the diagram generated by P' is said to be similar and similarly situated to the original diagram D.

Shew, as regards plane polygons, that this definition of similarity agrees with Euclid's.

Shew how the principles of similarity may be utilised in

solving the problem "To inscribe an equilateral triangle in any given triangle."

3. Shew that the areas of similar triangles are in the duplicate ratio of homologous sides: and explain briefly how this theorem can be extended to any similar figures, rectilinear or curvilinear.

ABC is an equilateral triangle; $DGFE$ a square of equal area. D and E lie on BC so that $BD=EC$. If DG and GF meet AB in P and Q respectively, shew that $PQ^2=AQ^2+BP^2$: and calculate AQ, taking BC to be unity.

4. Explain what is meant by saying that a point has a "locus": and illustrate by examples in space of two and of three dimensions.

ABC is a fixed triangle, and $DEFG$ a variable rectangle, such that the vertices E and F lie on BC, and the vertices D and G on AB and AC respectively. Find the locus of the centre of the rectangle $DEFG$.

5. A variable circle touches two given circles in the points P and Q respectively: shew that the line PQ always passes through a fixed point.

Discuss the problem "To describe a circle touching three given circles."

6. Prove (geometrically) the following theorem, and also its converse—"If a straight line meet the three sides of a triangle in the points D, E, F, the product of the three position-ratios of D, E, F with respect to B, C; C, A; A, B respectively is $+1$."

$ABCD$ is a quadrilateral whose two pairs of opposite sides BA, CD and AD, BC meet in the finite points Q and R respectively. If P be the intersection of the diagonals, shew that it is impossible that QP should bisect the angle AQD and at the same time RP bisect the angle CRD.

7. Shew that if a straight line is perpendicular to any two

non-parallel straight lines in a plane, it is perpendicular to every line in the plane.

Shew that if the orthocentre of one face of a tetrahedron be the orthogonal projection of the opposite vertex on that face, the same is true for every face of the tetrahedron.

8. Calculate the volume of a regular octohedron and the radius of the circumscribing sphere in terms of the length of an edge.

Find also the ratio of the volume of the cube whose vertices are the centroids of the faces to the volume of the octohedron.

9. Establish the theorem of Archimedes regarding the quadrature of a spherical zone.

A right circular cone touches a given hemisphere along a circle and the bases of the two solids are in the same plane; prove that when the volume of the cone is a minimum its curved surface is a minimum also.

10. Write down in full the simplest symmetric integral function of which one term is Ax^3y^2z; and determine the coefficient A so that the value of the function shall be $+2$ when $x=0$, $y=1$, $z=2$.

Simplify and arrange

$$(x+y+z)(x^2+y^2+z^2-yz-zx-xy)^2-(x^3+y^3+z^3)(x^2+y^2+z^2).$$

11. P and Q being two integral functions, define the "remainder" of the quotient $P \div Q$; and shew that the integral function thus defined is perfectly determinate when P and Q are given.

If $\dfrac{x^5+3x^4+x^3+1}{x^2+2x+3} = ax^3+bx^2+cx+d+\dfrac{ex+f}{x^2+2x+3}$, determine the constants e and f in this identity.

Express as a single rational fraction at its lowest terms

$$\frac{y-z+x}{x^2+yz+zx+xy}+\frac{z-x+y}{y^2+yz+zx+xy}+\frac{x-y+z}{z^2+yz+zx+xy}.$$

12. Shew that $ax^2+2hxy+by^2+2gx+2fy+c$ can be resolved

into two linear factors, provided $abc+2fgh-af^2-bg^2-ch^2=0$. What is the condition that the co-efficients of the two factors be real?

Factorise as far as you can $x^2(y^3-z^3)+y^2(z^3-x^3)+z^2(x^3-y^3)$.

13. Solve the following equations

(α) $x^4+1/x^4+x^2+1/x^2=325/16$;

(β) $\sqrt{\{x+\sqrt{(1-x)}\}}=\sqrt{\{x-\sqrt{(1-x)}\}}+\sqrt{(4-2x)}$.

The sides of a rectangle are 8 and 9 feet long respectively. Two circles touch each other; and one of them touches one pair of sides of the rectangle and the other the opposite pair; if the sum of the areas of the circles be 17π square feet, find the radii. Discuss carefully the number of possible solutions of the problem.

If instead of the sum of the areas, the sum of the circumferences of the circles were given, what peculiarity arises?

14. Shew how to sum the series $1+2+\ldots+n$, $1^2+2^2+\ldots+n^2$: and shew that your results enable you at once to sum the series whose *nth* term is $(n^3-1)/(n-1)$.

ABC is a triangle right-angled at C. D, E, F are points on BC, CA, AB respectively such that $DCEF$ is a square. The square $DCEF$ is cut out of the area ABC. A square is cut in like manner out of AFE; and so on *ad infinitum*. How much of the area of the original triangle is finally left?

15. Find the conditions that the square root of $a+\sqrt{b}$, where a and b are rational and $\sqrt{b}$ a surd, can be expressed in linear form (*i.e.* as a sum of simple quadratic surd terms).

Express

$$\sqrt{\left\{\frac{a+b+2\sqrt{(ab)}}{a+b-2\sqrt{(ab)}}+\frac{a+b-2\sqrt{(ab)}}{a+b+2\sqrt{(ab)}}+2\right\}} \text{ in linear form.}$$

Simplify

$$\sqrt{\left(\frac{\sqrt{2}+\sqrt{3}i}{\sqrt{2}-\sqrt{3}i}\right)}+\sqrt{\left(\frac{\sqrt{2}-\sqrt{3}i}{\sqrt{2}+\sqrt{3}i}\right)}, \text{ where } i^2=-1.$$

FRENCH.

MONDAY, 10*th October* 1898.—2 *to* 3.30 P.M.

I. Translate into English :—

(*a*) Il y a en effet beaucoup à apprendre au cœur même de cette belle France, qu'il n'est pas de mode de visiter, et qui par conséquent cache encore ses sanctuaires de poésie et ses mines de science dans des recoins inabordables. C'est ici un pays sans chemins et sans guides, sans aucune facilité de locomotion, et où il faut conquérir toutes ses découvertes au prix du danger ou de la fatigue. Les gens qui l'habitent ne le connaissent pas plus que les étrangers. La vie purement agricole limite à de courts horizons les notions de chaque localité : il est donc impossible de se renseigner en marchant, à moins de connaître le nom et la position relative de toutes les petites bourgades ; sans une carte détaillée que je dois consulter à chaque pas, bien que je vienne ici pour la troisième fois, je ne pourrais me diriger qu'à vol d'oiseau, chose tout à fait impracticable sur un sol coupé de profonds ravins, traversé en tous sens par de hautes murailles de lave, et sillonné de nombreux torrents. Rien, mon ami, ne peut te donner l'idée de la beauté pittoresque de ce bassin du Puy, et je ne connais point de site dont le caractère soit plus difficile à décrire. Ici point de riche Limagne, arène vaste et tranquille de moissons et de prairies abritées au loin par un horizon de montagnes soudées ensemble ; point de plateaux fertiles fermés de fossés naturels. Non, tout est cime et ravin, et la culture ne peut s'emparer que de profondeurs resserrées et de versants rapides. Elle s'en empare, elle se glisse partout, jetant ses frais tapis de verdure, de céréales et de légumineuses avides de la cendre fertilisée des volcans, jusque dans les interstices des coulées de lave qui la rayent dans tous les sens.

GEORGE SAND.

(*b*) Le crépuscule tombait, les eaux du lac prenaient des tons de turquoise verdie, et, au fond du ciel encore clair, les premières étoiles perlaient dans l'or pâle du couchant. L'une après l'autre, les cloches des villages sonnèrent l'*Angelus*, et leurs tintements s'égrenèrent jusqu'au Bout-du-Lac. Les croupes des montagnes se noyaient dans un bleu sombre ; les crêtes seules découpaient finement leurs lignes accidentées sur le ciel pur. Les oiseaux s'étaient tus, mais dans le silence de la nuit survenante, une musique plus discrète remplaçait maintenant les limpides sonneries de l'*Angelus* : trémolo en sourdine des grillons, trilles flûtées des rainettes, clapotement frais de l'eau contre les pierres du talus. Tout à coup, au-dessus de l'échancrure de la Forclaz, la lune surgit à l'horizon et monta, faisant pâlir les feux tremblants des étoiles. Une partie de la surface sombre du lac s'éclaira, traversée de part en part d'un frisson argenté et intermittent, qui s'étendait d'une rive à l'autre comme un immense filet aux mailles scintillantes.

André Theuriet.

II. Translate into French :—

We all know how unwilling we are to admit the truth of any disgraceful story about a person whose society we like, and from whom we have received favours ; how long we struggle against evidence, how fondly, when the facts cannot be disputed, we cling to the hope that there may be some explanation or extenuating circumstance with which we are unacquainted. Just such is the feeling which a man of liberal education naturally entertains towards the great minds of former ages. The debt which he owes to them is incalculable. They have guided him to truth. They have filled his mind with noble and graceful images. They have stood by him in all vicissitudes, comforters in sorrow, nurses in sickness, companions in solitude.

GERMAN.

MONDAY, 10*th October* 1898.—3.30 *to* 5 P.M.

I. Translate into English :—

Karl Neufeld ſtudirte Medizin in Leipzig und ging frühzeitig nach Ägypten, wo er bald als Arzt, bald als Kaufmann thätig war. Nach dem Falle Khartums und der Errichtung des Mahdireiches in Omdurman ſcheint Neufeld der Plan einer Handelsverbindung mit dem gänzlich abgeſchloſſenen Sudan vorgeſchwebt zu haben, denn er rüſtete eine Karawane aus und zog nach Berber, das in den Händen Osman Digna's war. Dieſer ſchickte den Deutſchen, den er für einen gefährlichen Spion hielt, an den Khalifen Abdullahi. Das war 1886. Neufeld war in Omdurman dem ſicheren Tode beſtimmt und er wurde zum Hinrichtungsplatze geführt. Hier benahm er ſich ſo mannhaft und verlangte einen Tod als Muhamedaner (d. h. nicht den Hängetod), daß der Khalif ſtutzig wurde und ihn unter dem Galgen begnadigte. Er wurde in's allgemeine Gefängniß gebracht, mit ſchweren Ketten an Händen und Füßen, und hier in der elendeſten Weiſe behandelt. Nur mitleidigen Weibern hatte er ſeine Ernährung zu verdanken. Dann ſuchte man die Kenntniſſe des Europäers auszunutzen. Kanonen gießen konnte er nicht, aber Pulver mußte er herſtellen, und es wurde ihm aufgegeben, eine Prägemaſchine für Münzen zu erfinden. Da ſeit faſt zehn Jahren Goldmünzen des Khalifen vorhanden ſind, iſt anzunehmen, daß Neufeld der Herſteller iſt. Seine Gefangenſchaft wurde auch erleichtert, er erhielt monatlich vom Khalifen 15 Maria-Thereſienthaler, die ſpäter auf das Doppelte erhöht wurden. Durch die Flucht des Paters Ohrwalder und ſpäter Slatin Paſcha's verſchlimmerte ſich ſeine Lage. Er wurde wieder in Ketten gelegt und mit Arm- und Beinabhauen bei einem Fluchtverſuch bedroht. An Bemühungen, ihn zu befreien, fehlte es nicht. Die öſterreichiſche katholiſche Miſſion, durch Pater Ohrwalder veranlaßt, Slatin Paſcha, die britiſche Regierung, die deutſche und ganz beſonders

die öſterreichiſche Vertretung in Kairo, die bei allen Befreiungen die rettende Hand geboten hat, verſuchten, Neufeld zur Flucht zu verhelfen. Geld hat er oftmals erhalten, aber zu fliehen weigerte er ſich, da er ohne ſeine Frau nicht die Freiheit erlangen wolle. Dieſe wäre den furchtbarſten Martern ausgeſetzt geweſen, und darum blieb Neufeld in der Gefangenſchaft. Er hat ſich ſpäter als Künſtler bethätigt, und da er gut zeichnen konnte, hat er das Grabmal des Mahdi in Omdurman künſtleriſch ſo ausgeſchmückt, daß die Frauen des Khalifen um ſeine Freilaſſung baten. Auch ſoll er arabiſche Bücher geſchrieben und ſie illuſtrirt haben. Jedenfalls ſind ihm die letzten Jahre ſeiner zwölfjährigen Gefangenſchaft weniger hart geworden, da er nach der Flucht Slatins dem Khalifen als Dolmetſch und Überſetzer europäiſcher Zeitungen dienen mußte, die der Beherrſcher des Sudan regelmäßig empfing.

II. Translate into German:—

Brigandage in Sicily has a permanence which foreigners cannot easily explain. The mere question which is so often asked—whether it cannot be stamped out of existence—shows a total ignorance of its nature. You may knock off a lizard's tail in winter with a switch, as most people know, but you cannot prevent the tail from growing again in the spring and summer, unless you kill the lizard outright. Brigandage is not a profession, as most people suppose. A man does not choose it as a career. It is the occasional but inevitable result of the national character under certain conditions, which are sure to renew themselves from time to time. The success of brigandage, whenever it manifests itself, depends primarily upon the almost inaccessible nature of some parts of the island, and, secondly, upon the helplessness of the peasants to defend themselves in remote places.

GAELIC.

FOR MACKINNON BURSARY AND PRELIMINARY.

1. Translate into English :—

Gur sòlas an ceòl cluaise
Ard bhàirich buair mu d' chrò;
Laoigh chean-fhionn, bhreac', is ruadha,
Ri freagradh nuallan bhò;
A' bhanarach le buaraich,
'S am buachaill' dol 'n an còir,
Gu bleoghan a' chruidh ghuaillfhinn
Air cuaich a thogas cròic.

2. Translate into Gaelic :—

All about him is black as the wing of the night raven. Nothing can I spy that can mark him farther—but having once seen him put forth his strength in battle, methinks I could know him again among a thousand warriors. He rushes to the fray as if he were summoned to a banquet. There is more than mere strength; there seems as if the whole soul and spirit of the champion were given to every blow which he deals upon his enemies.

3. Translate into English :—

Mise 's tusa, '*ghadhair* bhàin,
'S tursach ar turas do'n *Eilean*;
Chaill sinn an tabhunn 's an dàn,
Ged bha sinn grathunn ri ceineal:
Thug a' choille dhiotsa 'n earb,
'S thug an t-*àrd* dhiomsa na féidh;
Cha'n 'eil nàire dhuinn, a *laoich*,
O'n luidh an *aois* oirnn le chéil'.

4. Parse the words in italics, adding a note as to their philological relationship.

5. Name the prepositions which aspirate their object. Illustrate uses in idiom of *air* and *ri*.

6. Quote ten lines from any noted Gaelic poet, and give a short account of his life and work.

HIGHER GEOMETRY.

FOR WELSH MATHEMATICAL BURSARIES AND KELLAND PRIZE.

MONDAY, 10*th October* 1898.—9 *to* 12 *o'clock*.

Candidates are requested to note on their papers the Bursary or Bursaries for which they compete.

1. Define a Geometrical Problem, and, in particular, an Elementary, Geometrical, or Euclidean Problem.

Solve the problem to bisect a given straight line, making reference to, or quoting, all the Euclidean Propositions and Postulates necessary for its solution.

ABC is a triangle of constant perimeter, whose base AB is fixed. If C be any position on the locus of the third vertex, give a Euclidean construction for the tangent to the locus at C.

2. What is meant by the Dimensions of a Space?

Find the number of data necessary to determine the position alone, (i.) of an unlimited straight line, (ii.) of a line of given length d, in ordinary space.

Find the number of data necessary to determine completely a figure consisting of eight points, five of which (but no other four) are coplanar, while three of the five are in the same line.

3. Shew that the area of any quadrilateral is equal to the area of the triangle whose two sides are parallel and equal to the diagonals of the quadrilateral.

Give a definition of the area of a figure bounded by a closed perimeter which will apply to crossed, as well as to noncrossed, figures.

$ABCDEF$ is a regular hexagon of side a. Find the area of the crossed hexagon $ACFDEBA$.

4. Shew that any two circles can be inverted into two circles of equal radius in an infinity of ways.

Give the Inverse statements to the following :—

(i.) Two straight lines determine a point.

(ii.) Four tangents can be drawn to two non-intersecting circles.

(iii.) Four circles may in general be drawn to touch three given straight lines.

5. If any point be taken on the circle round a triangle, prove that its projections on the sides lie in a straight line.

Shew that in general a point can be found whose projections on four given lines are collinear.

If four lines be taken forming four triangles, the four circumscribing circles pass through a common point.

6. Any three lines are taken in a plane. Shew how to draw a transversal to them such that the intercepts made on it by the lines are in a given ratio to each other.

The sides BC, CA, AB, of $\triangle ABC$, are divided in a common ratio ρ in D, E, F respectively. DB and FE are divided in the same ratio ρ in K and L. Prove KL parallel to AB.

Find the length of KL in terms of AB and ρ.

7. If two projective ranges are such that the joins of three pairs of corresponding points are concurrent, prove that the two ranges are in perspective.

OPQ are three points in a given line. Give a linear construction for the point R such that $(OPQR)$ is harmonic.

8. O is a fixed point, OPQ a secant to a fixed circle. If R be taken such that R is the harmonic conjugate of O with respect to P and Q, find the locus of R as the secant changes.

If $ABCD$ are four fixed points on a circle, and O any fifth point on the circle, shew that the cross ratio of the pencil formed by OA, OB, OC, OD, does not change with O.

Give the reciprocal theorem, and state the theorems of which these are particular cases.

9. Prove the sum of any two faces of a trihedral angle greater than the third face.

Deduce the theorem that the great circle joining two points on a sphere determines the shortest path on the sphere from the one point to the other.

10. Define a cone, and shew that any two parallel plane sections are similar curves.

Two similar curves in parallel planes are given. If the line joining two points of one is parallel to the line joining the homologous points of the other, prove that the two curves are sections of one and the same cone, and find the volume of the frustrum of the cone thereby determined in terms of the areas of the similar figures and the distance between their planes.

11. Prove that the part of a tangent to a parabola, intercepted between the point of contact and its point of intersection with the directrix, subtends a right angle at the focus.

A line L is drawn parallel to the directrix of a parabola at a distance from the vertex equal to the latus rectum. Any point P is taken on the parabola, and PQ drawn parallel to the axis meeting L in Q. Shew that PQ subtends a right angle at the vertex.

12. Find the locus of the projections of a focus of an ellipse upon the tangents to the ellipse.

An ellipse rolls upon a congruent ellipse, corresponding points being points of contact. Shew that the curve traced out by the focus of the rolling ellipse is a circle.

Preliminary Examination Papers for Degrees in Medicine.

ENGLISH.

SATURDAY, *1st October* 1898.—9 A.M. *to* 12 NOON.

EIGHT, *and not more than* EIGHT *questions are to be answered.* 1 *and* 2 *must be answered, with either* 3 *or* 4 *and either* 5 *or* 6. *The remaining* FOUR *may be any questions not already answered.*

1. Write an essay, from two to three pages long, on one of the following subjects:—

(*a*) The value of colonial possessions.

(*b*) Ghosts.

(*c*) Blood is thicker than water.

2. Paraphrase:—

> And statesmen boast
> Of wealth! The wordy eloquence that lives
> After the ruin of their hearts, can gild
> The bitter poison of a nation's woe,
> Can turn the worship of a servile mob
> To their corrupt and glaring idol Fame,
> From virtue, trampled by its iron tread,
> Although its dazzling pedestal be raised
> Amid the horrors of a limb-strewn field,
> With desolated dwellings smoking round.
> The man of ease who by his warm fireside,
> To deeds of charitable intercourse
> And bare fulfilment of the common laws
> Of decency and prejudice, confines
> The struggling nature of his human heart,
> Is duped by their cold sophistry; he sheds
> A passing tear perchance upon the wreck
> Of earthly peace, when near his dwelling's door
> The frightful waves are driven.

3. Give some account of *four* of the following:—James I. of Scotland, the Black Prince, Richard II., Henry VI., the Lollards, Cardinal Wolsey, Strafford, the Long Parliament, the Puritans.

4. Give some account of *four* of the following:—Marlborough, Walpole, Warren Hastings, Earl of Chatham, the "1745," the conquest of India, the Peninsular War, Nelson's victories.

5. Where, and for what noted, are any *six* of the following?—Aden, Simla, Dresden, Port Arthur, Coventry, Chicago, Brindisi, Davos-Platz, Woolwich, Mandalay, Valparaiso.

6. Give some account of the climate and natural resources of Egypt.

7. Re-write, so as to correct and improve, the following sentences, giving reasons for any changes you may make:—

(*a*) I may tell you that neither the name of husband nor wife have had the least influence in the matter.

(*b*) I saw that since yesterday a barber's pole had been affixed with something of a smile.

(*c*) The youngest son disappeared, whom they agree was the smarter of the two.

(*d*) Walking to the other side of the deck, the whale appeared *en plein air* spouting his heart's content.

8. Give a *general* analysis of the following passage, and parse the words in italics:—

For, before Cythna loved it, *had* my song
  Peopled with thoughts the boundless universe,
A mighty congregation, which were strong,
  Where'er they trod the darkness, to disperse
  The cloud of that unutterable curse
Which clings upon mankind:—all things became
  Slaves to my holy and heroic verse,
Earth, sea and sky, the planets, *life* and fame,
And fate, or *whate'er else* binds the world's wondrous frame.

9. Describe and illustrate the different ways in which gender is indicated in English. What are the exceptions to the rule that the feminine is formed from the masculine?

10. (*a*) Derive *nine* of the following words:—*atone, treacle, endeavour, industrious, bazaar, contraband, littoral, literal, stipulate, surface, guinea, extirpate.*

Or, (*b*) What is the force of each of the following prefixes and suffixes, and from what language is it derived?—*per-, sub-, a-, dia-, -en-, -ling, -et, -ry.*

11. Give the authors, the approximate dates, and brief particulars of any *three* of the following:—*The Knight's Tale, The Two Gentlemen of Verona, In Memoriam, The Spectator, Lycidas, The Pirate, The Shepherd's Calendar, Esmond.*

12. Write a brief note on any *five* of the following:—*Frankenstein,* Kit-Cat, Dutch Auction, *Doctor Syntax, Utopia,* The Age of Bronze, The Swan of Avon, Sibylline verses, Scotland Yard, Muscular Christianity, Light Railways, Bairam Festival, Ironsides.

SATURDAY, 1*st April* 1899.—9 *to* 12 NOON.

1. Write an essay, from two to three pages in length, on one of following subjects:—

(*a*) The Conquest of the Soudan.

(*b*) Characters of medical men in works of fiction.

(*c*) The Arabian Nights.

2. Paraphrase the following:—

John of Gaunt to His Banished Son.

All places that the eye of heaven visits
Are to a wise man ports and happy havens.
Teach thy necessity to reason thus;
There is no virtue like necessity.
Think not the King did banish thee,

But thou the King. Woe doth the heavier sit,
Where it perceives it is but faintly borne.
Go, say I sent thee forth to purchase honour,
And not the King exiled thee . or suppose
Devouring pestilence hangs in our air,
And thou art flying to a fresher clime.
Look, what thy soul holds dear, imagine it
To lie that way thou go'st, not whence thou comest:
Suppose the singing birds musicians,
The grass whereon thou tread'st the presence strewed,
The flowers fair ladies, and thy steps no more
Than a delightful measure or a dance.

3. (*a*) Give some account of *four* of the following:—St. Augustine, De Montfort, The Cecils, The Cabots, Chevy Chase, O'Neill's Rebellion, The Peasant War, The Great Harry, Maintenance, El Dorado.

Or,

(*b*) Comment upon the following passages:—

1. "False, fleeting, perjured Clarence,
That slew me on the field by Tewkesbury."
2. "Ye towers of Julius! London's lasting shame,
With many a foul and midnight murder fed."
3. "At Flores in the Azores Sir Richard Grenville lay."
4. "A king has come to marshal us,
All in his armour drest."

4. (*a*) Give some account of *four* of the following:—Duns Law, Battle of Plassy, Death of Wolfe, Relief of Derry, Career and Fate of Montrose, Massacre at Cawnpore, Boston Tea-party, Rorke's Drift, Death of Gordon.

Or,

(*b*) Comment upon the historic interest of *four* of the following:—

Burke's Oratory, "Eikon Basilike," "Absalom and Achi-

tophel," "North Briton," Drapier Letters," "The Spectator," "No Bishop, no King," "New Presbyter is but old Priest writ large."

5. Where, and for what noted, are any *six* of the following:—Mombasa, Kiel, Barrow, Delagoa Bay, Duluth, Manila, Apia, Port Said, Wady Halfa, Suda Bay, Trieste, Santiago?

6. Comment upon the geographical interest of *four* of the following:—Spheres of influence, Extradition, French Shore, Kroo-men, Cow-boys, Lumberers, Most Favoured Nation, Treaty Ports, Ice-free Port, Pan-Slavism.

7. Re-write, so as to correct and improve, the following sentences, *giving reasons for any changes you may make*:—

(*a*) I would prefer to trust my friend than to believe he would demean himself by deceiving me.

(*b*) I intended to have gone to London as soon if not sooner than you.

(*c*) The Liberal candidate was handled with equal roughness as the Conservative, and neither were listened to.

(*d*) Having perceived the silliness of his intentions, these are now disappearing like chaff before the sunshine.

8. Give a *general* analysis of the following passage, and parse the words in italics:—

"Is it too late *then*, Evelyn Hope?
What, your soul was pure and true,
The good stars met in your horoscope,
Made you of spirit, fire, and dew—
And *just* because I was thrice as old,
And our paths in the world diverged so *wide*,
Each was nought to each, must I be told?
We were fellow-mortals, nought beside?"

9. (*a*) Give the derivation of *eight* of the following words:—Cancer, poison, digest, deglutition, anatomy, function, lumbago,

ligament, vertebra, essay, sample, ransom, pungent, engross, eradicate, incisors.

Or,

(*b*) Give equivalents from the Latin for *five* of the following, adding the derivations of these equivalents:—Hostile, hurtful, haughty, talkative, hesitate, cease, reckon, scatter, belief, hindrance, home, betterment.

10. Make sentences illustrating the various uses of "like," and explain the grammatical import of each. Give examples of faulty uses of the word.

11. Write short notes on some of the most famous works which appeared during the reign of any *one* of the following:—James IV., James I. (of England), Charles II., George I., George II., George III.

Or,

Write a short account of *one* famous British work of *each* of the following kinds:—(*a*) history, (*b*) elegy, (*c*) essay, (*d*) allegory in verse.

12. Give the meaning of any *five* of the following terms or phrases: "One man, one vote," "Local Option," "Corner in cotton," "Clearing-house," "Middle Ages," "Heroic Couplet," "Continental Sunday," "Trans-substantiation," "Wireless telegraphy," "Anti-cyclone."

LATIN—GREEK—MATHEMATICS.

The Papers in Latin, Greek, and Mathematics are the same as the Lower Standard Papers in these subjects for Degrees in Arts and Science.

FRENCH.

TUESDAY, *4th October* 1898.—3 *to* 6 P.M.

I. Translate into French:—

(*a*) His son, though a brave nobleman, did not feel himself

strong enough to obtain the throne as long as Baliol reigned; so he lived quietly on his estates in Annandale, amusing himself chiefly with hunting. The story goes that on one of these hunting expeditions he met the beautiful Countess of Carrick, who invited him to visit her in her castle of Turnberry. When the hunt was over he accepted the invitation, and at the end of a fortnight's visit he asked the young Countess to be his wife. She had already fallen in love with the handsome young nobleman, so they were married. When their first son was born they called him Robert Bruce. He was thus the third to bear this name, and was destined to be the future King of Scotland.

1. He used to get up every morning very early.
2. I was getting gradually accustomed to my new work.
3. He was sitting on a wall.
4. Wine was selling then at three francs a litre.
5. Which of these two books do you like best?

II.—Grammar.

1. Write out the future perfect of *s'en aller* interrogatively, using the feminine pronoun in the third person singular and plural.

2. Give the first person singular of the past definite (preterite) of: *revenir, recevoir, prendre, peudre, peindre, lire, nager, croire, vivre, vaincre, mettre, pouvoir.*

3. Give the masculine of: *folle, fraîche, rousse, vieille, naïve, grecque, franche, louve, marraine, pêcheuse.*

4. When is *plus que* used in French and when *plus de*? Form short illustrative sentences.

5. Parse fully the words printed in italics in the following extracts from Mme. de Staël and Toppfer.

III. Translate into English:—

(*a*) J'étais à table avec trois de mes amis, dans une salle d'où l'on voyait le grand chemin et la porte d'entrée; c'était à la fin de septembre. A quatre heures, un homme en habit gris, à

cheval, s'arrête à la grille et sonne : je fus certaine de mon sort. Il me fit demander ; je le reçus dans le jardin . . . Cet homme *me* dit qu'il était le commandant de la gendarmerie de Versailles . . . Il me montra une lettre signée de Bonaparte, *qui* portait l'ordre de m'éloigner à quarante lieues de Paris, et enjoignait de me faire partir dans les vingt-quatre heures, en me traitant cependant avec tous les égards *dûs* à une femme d'un nom connu. MME. DE STAËL.

(*b*) Mais pendant que, couché sur l'herbe, je promène mes regards sur les campagnes, voici que les champs pâlissent insensiblement : une terne lumière a remplacé le vif éclat des prairies, et une haleine froide ride les flots assombris. *Que* tout est morne ! et au lieu de ces *riantes* clartés de tout à l'heure, quel deuil ingrat et lugubre ! Cependant au ciel tout s'ébranle, tout s'agite, et de tous les points de l'horizon les nuées, comme des escadrons innombrables, envahissent les plages de l'air, se mêlent, se choquent, s'embrasent ; le tonnerre gronde, la foudre éclate . . . et du sein des orages je ne *sais* quels traits de beauté *viennent* m'apporter le tressaillement du plaisir jusque sous cette voûte de rocher *où* j'ai trouvé un abri.

TOPPFER.

TUESDAY, *4th April* 1899.—3 *to* 6 P.M.

I. Translate into French :—

1. The most wonderful of the events that happened to me in my younger days was this : I was residing in Damascus, where I learnt and practised my art ; and, while I was thus occupied, one day there came to me a servant from the house of the governor of the city. I went with him and accompanied him to the abode of the governor. I entered, and beheld at the upper end of a saloon a sofa, upon which was reclining a sick man. He was young ; and a person more comely had not been

seen in his age. Seating myself by his side, I asked him to let me feel his pulse, whereupon he put forth to me his left hand. I was surprised at this, and said within myself: "What insolence!"

2. (*a*) Is it not very cold to-day?
   (*b*) He said he could not believe it.
   (*c*) I heard from him a week ago.
   (*d*) He will answer all the questions you ask him.
   (*e*) How is he? A little better than yesterday.

II. Translate into English :—

1. Par une splendide matinée de printemps, cheminaient sur une des grandes routes qui sillonnent nos riches campagnes trois vigoureux enfants de la Champagne : le cœur gros, la bourse légère, ils quittaient le toit paternel. Ils se dirigeaient vers Paris, non qu'ils voulussent y chercher fortune, mais au contingent scientifique, qu'ils avaient recueilli des leçons de Monsieur le curé, ils sentaient le besoin d'ajouter, car ils étaient ambitieux. L'un d'eux visait à être le médecin du canton et, se partageant le pays, les deux autres voulaient y être apothécaires ; le plus téméraire allait même jusqu'à rêver d'associer à son laboratoire un petit commerce d'épicerie.

2. Pourtant Cromwell mourut triste. Triste, non seulement de mourir, mais aussi, et surtout, de mourir sans avoir atteint son véritable et dernier but. Quel que fût son égoisme, il avait l'âme trop grande pour que la plus haute fortune, mais purement personnelle et éphémère, comme lui-même ici-bas, suffît à le satisfaire. Las des ruines qu'il avait faites, il avait à cœur de rendre à son pays un gouvernement régulier et stable le seul gouvernement qui lui convînt, la monarchie avec le Parlement. Et en même temps ambitieux au-delà du tombeau, par cette soif de la durée qui est le sceau de la grandeur, il aspirait à laisser son nom et sa race en possession de l'empire dans l'avenir. Il échoua dans l'un et l'autre dessein : ses

attentats lui avaient créé des obstacles que ni son prudent génie ni sa persévérante volonté ne purent surmonter.

III.—Grammar.

1. Illustrate by short sentences the use of the following words:—*avant, devant, dans, dedans, sous, dessous.*

2. Write the comparative and superlative of *peu, bien, mal, beaucoup, petit, mauvais.*

3. Write the second person singular and second person plural of the imperative of *aller, mouvoir, boire, faire, venir, craindre.*

4. Give the feminine forms of *maître, empereur, acteur, baron, marcheur, meilleur.*

6. Forms adverbs from *lent, constant, frais, sot, mou, sec.*

GERMAN.

Wednesday, *5th October* 1898.—3 *to* 6 p.m.

I. Translate into English:—

(*a*) Auf einem in der Nähe des Wohngebäudes aus rohen Steinen erbauten Turme aber wachte der Wächter und ſpähte in das Dunkel hinaus. Auch im Wohngemach des Hauſes war noch Licht. Von den dicken eichenen Balken der Decke hing an eiſerner Kette ein Kienſpan, der den Raum ſpärlich erleuchtete. An den gebräunten Holzwänden hingen rieſige Hörner, Jagdſpieße und Schwerter. An einem erhöhten Platze, zu dem einige Stufen emporführten und der mit weichen Bärenfellen belegt war, ſaß Fürſt Siegmar. Er hatte das Haupt noch verbunden, jene Bläſſe aber, die nach dem Unfall ſein Antlitz überzogen hatte, war verſchwunden; mit kräftigen, heilſamen Salben hatte man die Wunde beſtrichen und dadurch ihr Brennen geſtillt. An der Seite des Fürſten, in hohem eichenem Stuhle ſaß ein Greis mit ſchneeweißen Kopf- und Barthaaren.

Ferdinand Goebel.

(*b*) Er ſtand da und ſah die düſtere Geſtalt mit dem Roſenknoſpen

in der Hand an, ſprach aber kein Wort, er nickte ihr nur zerſtreut zu und ging weiter durch die belebte Gaſſe, auf der die Kinder lärmten und die unter den Strahlen der Sonne in goldigen Staub gehüllt ſchien. Nur noch ein paar Krankenbeſuche waren zu machen, aber während er ſonſt geduldig an den Betten ſaß, nahm er heute kaum Platz, und ſeine Mienen drückten Unruhe und Abſpannung aus. Er wußte ſelbſt nicht, wie es kam, daß er den kürzeſten Weg nach Hauſe einſchlug durch ein Seitengäßchen, das unmittelbar zu dem Strome hinunterführte. Nie mehr war er hier gegangen ſeit jenem Schreckenstage; heute ſah er das blaugrüne, herrliche Waſſer wie erſtaunt an. HEIMBURG.

II. Translate into German:—

(*Candidates may use either English or German Script.*)

(*a*) When one of the peasants had opened the door, the wolf rushed out, and the spear of the Prince wounded it severely. The horse which he rode, however, became frightened, and threw him to the ground. As the Prince fell the wolf sprang on him. A cry of terror arose, a cry that was heard far and near, when suddenly George struck the wolf with his sharp knife, a stream of dark blood gushed forth, and the animal fell dead. The cry of terror was changed into a shout of joy, a shout in honour of the boy. George was well rewarded by the Prince for his brave deed, and he was thus enabled to buy his mother what she required.

(*b*) 1. I regret I have not been able to come sooner.
2. You may go away if you like.
3. I take the liberty of borrowing this book from you.
4. I am very sorry for what I have done.
5. The next train is going to start at twenty minutes to four.

III. GRAMMAR.

1. Give the German equivalents—in the nominative and genitive singular and nominative plural, with the definite

article—of *any six* of the following words:—*hero, clock, heap, calf, fork, neighbour, danger, valley, eye, heart, fist, worm.*

2. Distinguish between: erkalten, erkälten; lauten, läuten; beſtehen auf, beſtehen aus; Anſicht, Ausſicht; leblos, lebhaft; trinken, tränken.

3. Give (*a*) the second person singular of the present indicative of empfehlen, leſen, ablaſſen; (*b*) the first person singular of the imperfect, pluperfect, and future-perfect indicative passive of ſchlagen.

4. State the cases governed by zu, ohne, über, von, nach, and form short sentences to illustrate their use.

5. Decline in full, singular and plural, the German for:—*The open gate, my poor friend, old wine.*

WEDNESDAY, *5th April* 1899.—3 *to* 6 P.M.

I. Translate into English:—

(*a*) Felix war in den Garten geſprungen, Wilhelm folgte ihm mit Entzücken; der ſchönſte Morgen zeigte jeden Gegenſtand mit neuen Reizen, und Wilhelm genoß den heiterſten Augenblick. Felix war neu in der freien und herrlichen Welt, und ſein Vater nicht viel bekannter mit den Gegenſtänden, nach denen der Kleine wiederholt und unermüdet fragte. Sie geſellten ſich endlich zum Gärtner, der die Namen und den Gebrauch mancher Pflanzen hererzählen mußte; Wilhelm ſah die Natur durch ein neues Organ, und die Neugierde, die Wißbegierde des Kindes ließen ihn erſt fühlen, welch ein ſchwaches Intereſſe er an den Dingen außer ſich genommen hatte, wie wenig er kannte und wußte. An dieſem Tage, dem vergnügteſten ſeines Lebens, ſchien auch ſeine eigne Bildung erſt anzufangen; er fühlte die Notwendigkeit, ſich zu belehren, indem er zu lehren aufgefordert ward.

(*b*) Durch die grauen Nebel des Herbſtmorgens zog ein Schwarm von Wandervögeln. Wie zum Abſchiedsgruße ſtrichen ſie noch

einmal dicht über die Wipfel der Wälder hin, dann hoben sie sich hoch empor, wandten ihren Flug nach Süden und verschwanden langsam in der umschleierten Ferne.

Aus einem der Fenster des mächtigen schloßartigen Gebäudes, das am Rande der Forsten lag, blickte ein Paar Augen jenem Fluge nach, die ernsten, düstern Augen eines Mannes, der im Gespräche mit einem andern Herrn am Fenster stand. Es war eine hohe, markige Gestalt, mit nicht schönen, aber ausdrucksvollen Zügen, blond und blauäugig, eine echt germanische Erscheinung, dessen straffe Haltung auch ohne die Uniform, der er trug, den Soldaten verraten hätte.

II. Translate into German :—

1. One day when Ornit was standing, as he often did, on the sea-shore, watching the waves that rose and fell, coloured by the light of the setting sun, a mist came up out of the water. A few minutes more, and it parted slowly like a veil, showing a wondrous sight. It was a castle with towers and great walls, and on the wall stood a woman such as he had never seen before in all his travels. He could not take his eyes off her. The effect of her beauty on him was like enchantment. Then the mist gradually closed again, and lady and castle vanished as completely as if they had never been.

2. (*a*) I was sorry for your friend.
   (*b*) He who has done this will be punished.
   (*c*) You know that you must write to him.
   (*d*) We should have seen him, had he been able to come.
   (*e*) He has succeeded in all his enterprises.

III. Grammar.

1. Give the German equivalents—in the nominative and genitive singular and nominative plural, with the definite article—of *any six* of the following words :—Knowledge, pain,

art, leg, chin, gender, history, brother-in-law, slipper, edge, roof, hero, tree.

2. Form adjectives of *any six* of the following nouns:—Tag, Sonne, Holz, Irrtum, Abſicht, Land, Chriſt, Kind, Thor, Eiſen, Freund, Freude, Sturm, Bruder.

3. What is the German for "before" and "after":—

(*a*) as prepositions;

(*b*) as adverbs;

(*c*) as conjunctions?

Add sentences illustrating the use of each of these words.

4. State what different meanings are attached to different genders of each of these words:—Heide, Bauer, Flur, Erbe, See, Leiter.

5. Give the third singular of the present and imperfect indicative and the past participle of widerſtehen, leiden, umfallen, ziehen.

Papers for Ordinary Degree of M.A.

I.—LANGUAGE AND LITERATURE.

LATIN.

FIRST PAPER.

TUESDAY, *4th April* 1899.—9 *to* 11 *o'clock.*

1. Translate, with very short notes:—

(*a*) Nos hic in re publica infirma, misera commutabilique versamur: credo enim te audisse nostros equites paene a senatu esse disiunctos; qui primum illud valde graviter tulerunt, promulgatum ex senatus consulto fuisse, ut de eis, qui ob iudicandum pecuniam accepissent, quaereretur. qua in re decernenda cum ego casu non adfuissem sensissemque id equestrem ordinem ferre moleste neque aperte dicere, obiurgavi senatum, ut mihi visus sum, summa cum auctoritate, et in causa non verecunda admodum gravis et copiosus fui. ecce aliae deliciae equitum vix ferendae! quas ego non solum tuli, sed etiam ornavi: Asiam qui de censoribus conduxerant questi sunt in senatu se cupiditate prolapsos nimium magno conduxisse; ut induceretur locatio, postulaverunt.

(*b*) Itaque, credo, si civis Romanus Archias legibus non esset, ut ab aliquo imperatore civitate donaretur, perficere non potuit. Sulla, cum Hispanos et Gallos donaret, credo, hunc petentem repudiasset: quem nos in contione vidimus, cum ei libellum malus poeta de populo subiecisset, quod epigramma in eum fecisset tantummodo alternis versibus longiusculis, statim ex iis rebus, quas tunc vendebat, iubere ei praemium tribui, sed ea condicione, ne quid postea scriberet. qui sedulitatem mali poetae duxerit aliquo tamen praemio dignam, huius ingenium et virtutem in scribendo et copiam non expetisset?

2. Translate :—

His ego te, Aenea, ductorem milibus addam.
toto namque fremunt condensae litore puppes ;
signaque ferre iubent : retinet longaevus haruspex,
fata canens : O Maeoniae delecta iuventus,
flos veterum virtusque virum, quos iustus in hostem
fert dolor et merita accendit Mezentius ira,
nulli fas Italo tantam subiungere gentem :
externos optate duces. tum Etrusca resedit
hoc acies campo, monitis exterrita divom.

Translate, with brief notes :—

(*a*) sanguine Troiano ac Rutulo dotabere, virgo,
et Bellona manet te pronuba.

(*b*) has, ubi certa sedet patribus sententia pugnae,
ipse Quirinali trabea cinctuque Gabino
insignis reserat stridentia limina consul.

(*c*) ibat et Hippolyti proles pulcherrima bello
Virbius, insignem quem mater Aricia misit.

(*d*) hic exultantes Salios nudosque Lupercos
lanigerosque apices et lapsa ancilia caelo
extuderat.

3. Translate :—

Ne forte credas interitura, quae
longe sonantem natus ad Aufidum
non ante vulgatas per artes
verba loquor socianda chordis ;
non, si priores Maeonius tenet
sedes Homerus, Pindaricae latent
Ceaeque, et Alcaei minaces,
Stesichorique graves camenae :
nec, si quid olim lusit Anacreon,
delevit aetas : spirat adhuc amor
vivuntque commissi calores
Aeoliae fidibus puellae.

Give the scansion of the first four lines.

Translate and explain :—

occidit, occidit
spes omnis et fortuna nostri
nominis Hasdrubale interempto.

4. Translate :—

Id Tiberii animum altius penetravit : non enim simplices eas curas nec adversus externos militem quaeri : nihil relictum imperatoribus, ubi femina manipulos intervisat, signa adeat, largitionem tentet ; tamquam parum ambitiose filium ducis gregali habitu circumferat Caesaremque Caligulam adpellari velit. potiorem iam apud exercitus Agrippinam quam legatos, quam duces : compressam a muliere seditionem, cui nomen Principis obsistere non quiverit. accendebat haec onerabatque Seianus, peritia morum Tiberii odia in longum iaciens, quae reconderet auctaque promeret.

Translate and explain :—

(*a*) populo et plebi quadringenties tricies quinquies dedit.

(*b*) legem maiestatis reduxerat, cui nomen apud veteres idem sed alia in iudicium veniebant.

5. Translate :—

Si quid Palfurio, si credimus Armillato,
quidquid conspicuum pulchrumque est aequore toto,
res fisci est, ubicumque natat : donabitur ergo,
ne pereat. iam letifero cedente pruinis
autumno, iam quartanam sperantibus aegris,
stridebat deformis hiems praedamque recentem
servabat : tamen hic properat, velut urgeat auster.
utque lacus suberant, ubi quamquam diruta servat
ignem Troianum et Vestam colit Alba minorem,
obstitit intranti miratrix turba parumper ;
ut cessit, facili patuerunt cardine valvae ;
exclusi spectant admissa obsonia patres.
itur ad Atriden.

Translate and explain :—

(*a*) quamvis quota portio faecis Achaei ?

(*b*) vilibus ancipites fungi ponentur amicis,
boletus domino, sed quales Claudius edit
ante illum uxoris post quem nil amplius edit.

(*c*) praefectos Pelopea facit, Philomela tribunos.

6. Answer *any two* of the following :—

(1) Describe the control of affairs exercised by the Senate during the period of Rome's greatest territorial expansion. On what basis did the power of that body rest ?

(2) What is the meaning of the term *ager publicus* ? Name some of the chief laws passed to remedy abuses connected with it, and give their dates.

(3) Give a brief account of *two* of the following events in Roman history, and point out their significance :—The Siege of Syracuse, the Capture of Corinth, the Conspiracy of Catiline, the Capture of Vercingetorix.

(4) Enumerate the most important of the new officials created by Augustus, indicating briefly their duties : along with *either* Augustus' chief successes in foreign policy *or* the chief buildings and material reforms which he undertook in Rome.

(5) What theory of the character of Tiberius seems to you best to explain the facts of his life ?

7. Answer *one* of the following :—

(1) Define Virgil's position in the history of Epic Poetry at Rome. In what ways did he surpass his predecessors and influence his successors ?

(2) What do you consider to be the chief merits and defects of Horace as a lyric poet ? Illustrate from the Fourth Book of the Odes.

(3) State what is known about the life of Tacitus, and consider how far it explains the style and spirit of his writings.

(4) Give some account of *any two* of the following :—Naevius, Lucretius, Lucan, Pliny the Younger.

SECOND PAPER.

TUESDAY, *4th April* 1899.—11.30 A.M. *to* 1.30 P.M.

1. For Latin Prose:—

The slave-owners finding their slaves escaping thus unprosperously out of their grasp, set themselves to find a remedy for so desperate a disease, and were swift to avail themselves of any weakness, mental or bodily, through which to retain them in life. One of these proprietors being informed that a number of his people intended to kill themselves on a certain day, at a particular spot, and knowing by experience that they were likely to do it, presented himself there at the time which had been fixed upon, and telling the Indians, when they arrived, that he knew their intention, and that it was vain for them to attempt to keep anything a secret from him, he ended with saying, that he had come there to kill himself with them; that as he had used them ill in this world, he might use them worse in the next; with which he did dissuade them presently from their purpose.

2. Translate into English:—

Urbe fuit media nulli concessa potentum
ara deum: mitis posuit Clementia sedem,
et miseri fecere sacram; sine supplice numquam
illa novo, nulla damnavit vota repulsa.
auditi quicunque rogant, noctesque diesque
ire datum et solis numen placare querellis.
parca superstitio: non turea flamma nec altus
accipitur sanguis: lacrimis altaria sudant,
maestarumque super libamina secta comarum
pendent et vestes mutata sorte relictae.
mite nemus circa, cultuque insigne verendo
vittatae laurus et supplicis arbor olivae.
nulla autem effigies, nulli commissa metallo

forma dei : mentes habitare et pectora gaudet.
semper habet trepidos, semper locus horret egenis
coetibus : ignotae tantum felicibus arae.
fama est, defensos acie post busta paterni
numinis Herculeos sedem fundasse nepotes.
fama minor factis : ipsos nam credere dignum
caelicolas, tellus quibus hospita semper Athenae,
sic sacrasse loco commune animantibus aegris
confugium, unde procul starent iraeque minaeque
regnaque et a iustis Fortuna recederet aris.

GREEK.

FIRST PAPER.

WEDNESDAY, *5th April* 1899.—9 *to* 11 A.M.

1. (*a*) Translate, with short notes on the words underlined :—

δᾶερ ἐμεῖο, κυνὸς κακομηχάνου ὀκρυοέσσης,
ὥς μ' ὄφελ' ἤματι τῷ, ὅτε με πρῶτον τέκε μήτηρ,
οἴχεσθαι προφέρουσα κακὴ ἀνέμοιο θύελλα
εἰς ὄρος, ἢ εἰς κῦμα πολυφλοίσβοιο θαλάσσης,
ἔνθα με κῦμ' ἀπόερσε πάρος τάδε ἔργα γενέσθαι.
αὐτὰρ ἐπεὶ τάδε γ' ὧδε θεοὶ κακὰ τεκμήραντο,
ἀνδρὸς ἔπειτ' ὤφελλον ἀμείνονος εἶναι ἄκοιτις,
ὅς ἤδη νέμεσίν τε καὶ αἴσχεα πόλλ' ἀνθρώπων.
τούτῳ δ' οὔτ' ἄρ νῦν φρένες ἔμπεδοι, οὔτ' ἄρ' ὀπίσσω
ἔσσονται· τῷ καί μιν ἐπαυρήσεσθαι ὀΐω.

(*b*) Translate, with short notes on the syntax of moods and cases :—

(1) ὡς δ' ὅτε τις στατὸς ἵππος, ἀκοστήσας ἐπὶ φάτνῃ,
δεσμὸν ἀπορρήξας θείῃ πεδίοιο κροαίνων,
εἰωθὼς λούεσθαι ἐϋῤῥεῖος ποταμοῖο.

(2) σὺ δ' ἂν μαχέσαιο καὶ ἄλλῳ,
ὅν τινά που μεθιέντα ἴδοις στυγεροῦ πολέμοιο.

(3) ἀλλ' ἄγε νῦν ἐπίμειναν, Ἀρήϊα τεύχεα δύω.

(*c*) Scan the lines, noticing any peculiarities:—

(1) αἱ μὲν ἔτι ζωὸν γόον Ἕκτορα ὣς ἐνὶ οἴκῳ.

(2) οὐδὲ γὰρ οὐδὲ Δρύαντος υἱός, κρατερὸς Λυκόοργος.

(3) τόν ῥ' Ἕκτωρ καλέεσκε Σκαμάνδριον, αὐτὰρ οἱ ἄλλοι.

2. (*a*) Translate:—

εἰ μὲν γὰρ ἦν μοι μάρτυς οἷός εἰμ' ἐγώ,
καὶ τῆσδ' ὁρώσης φέγγος ἠγωνιζόμην,
ἔργοις ἂν εἶδες τοὺς κακοὺς διεξιών.
νῦν δ' ὅρκιόν σοι Ζῆνα καὶ πέδον χθονὸς
ὄμνυμι τῶν σῶν μήποθ' ἅψασθαι γάμων
μηδ' ἂν θελῆσαι μηδ' ἂν ἔννοιαν λαβεῖν.
ἦ τἄρ' ὀλοίμην ἀκλεὴς ἀνώνυμος,
ἄπολις ἄοικος, φυγὰς ἀλητεύων χθόνα,
καὶ μήτε πόντος μήτε γῆ δέξαιτό μου
σάρκας θανόντος, εἰ κακὸς πέφυκ' ἀνήρ.
εἰ δ' ἥδε δειμαίνουσ' ἀπώλεσεν βίον
οὐκ οἶδ'· ἐμοὶ γὰρ οὐ θέμις πέρα λέγειν.
ἐσωφρόνησε δ' οὐκ ἔχουσα σωφρονεῖν,
ἡμεῖς δ' ἔχοντες οὐ καλῶς ἐχρώμεθα.

(*b*) Translate *two* of the following passages, with notes on the syntax of the words underlined:—

(1) θᾶσσον ἢ λέγοι τις.

(2) εἰ μὴ γὰρ ὅρκοις θεῶν ἄφαρκτος ἠρέθην,
οὐκ ἄν ποτ' ἔσχον μὴ οὐ τάδ' ἐξειπεῖν πατρί.

(3) οὐ μὴ προσοίσεις χεῖρα μηδ' ἅψει πέπλων;

3. (*a*) Translate:—

ὥστε ταχείας τὰς ἐπαυρέσεις καὶ πρὸς τὸ τερπνὸν ἠξίουν ποιεῖσθαι, ἐφήμερα τά τε σώματα καὶ τὰ χρήματα ὁμοίως ἡγούμενοι. καὶ τὸ μὲν προσταλαιπωρεῖν τῷ δόξαντι καλῷ οὐδεὶς πρόθυμος ἦν, ἄδηλον

νομίζων εἰ πρὶν ἐπ' αὐτὸ ἐλθεῖν διαφθαρήσεται· ὅ τι δὲ ἤδη τε ἡδὺ καὶ πανταχόθεν τό τε ἐς αὐτὸ κερδαλέον, τοῦτο καὶ καλὸν καὶ χρήσιμον κατέστη. θεῶν δὲ φόβος ἢ ἀνθρώπων νόμος οὐδεὶς ἀπεῖργε, τὸ μὲν κρίνοντες ἐν ὁμοίῳ καὶ σέβειν καὶ μὴ ἐκ τοῦ πάντας ὁρᾶν ἐν ἴσῳ ἀπολλυμένους, τῶν δὲ ἁμαρτημάτων οὐδεὶς ἐλπίζων μέχρι τοῦ δίκην γενέσθαι βιοὺς ἂν τὴν τιμωρίαν ἀντιδοῦναι, πολὺ δὲ μείζω τὴν ἤδη κατεψηφισμένην σφῶν ἐπικρεμασθῆναι, ἣν πρὶν ἐμπεσεῖν εἰκὸς εἶναι τοῦ βίου τι ἀπολαῦσαι.

(*b*) Translate, with notes on the syntax of the words underlined :—

(1) *λέγεται Ἀλκμαίωνι, ὅτε δὴ ἀλᾶσθαι αὐτὸν, τὸν Ἀπόλλω ταύτην τὴν γῆν χρῆσαι οἰκεῖν.*

(2) *οὐ πρότερον ἐπαύσαντο ἐν ὀργῇ ἔχοντες αὐτὸν πρὶν ἐξημίωσαν χρήμασιν.*

Give rules for the constructions of *πρίν*.

4. Translate, with short notes on the words underlined :—

ἀλλ', οἶμαι, νῦν μὲν ἐπισκοτεῖ τούτοις τὸ κατορθοῦν· αἱ γὰρ εὐπραξίαι δειναὶ συγκρύψαι τὰ τοιαῦτα ὀνείδη· εἰ δέ τι πταίσει, τότ' ἀκριβῶς αὐτοῦ ταῦτ' ἐξετασθήσεται. δοκεῖ δ' ἔμοιγε, ὦ ἄνδρες Ἀθηναῖοι, δείξειν οὐκ εἰς μακράν, ἂν οἵ τε θεοὶ θέλωσι καὶ ὑμεῖς βούλησθε. ὥσπερ γὰρ ἐν τοῖς σώμασιν, ἕως μὲν ἂν ἐρρωμένος ᾖ τις, οὐδὲν ἐπαισθάνεται, ἐπὰν δὲ ἀρρώστημά τι συμβῇ, πάντα κινεῖται, κἂν ῥῆγμα κἂν στρέμμα κἂν ἄλλο τι τῶν ὑπαρχόντων σαθρὸν ᾖ, οὕτω καὶ τῶν πόλεων καὶ τῶν τυράννων, ἕως μὲν ἂν ἔξω πολεμῶσιν, ἀφανῆ τὰ κακὰ τοῖς πολλοῖς ἐστιν, ἐπειδὰν δὲ ὅμορος πόλεμος συμπλακῇ, πάντα ἐποίησεν ἔκδηλα.

5. Translate *one* of the following passages, with explanatory notes on the subject matter :—

(*a*) *ἔνθεν καὶ ἔνθεν αὐτοῦ ἀρξάμενοι ἀπὸ τοῦ βραχέος τείχους ἐκ τοῦ ἐντὸς μηνοειδὲς προσῳκοδόμουν, ὅπως εἰ τὸ μέγα τεῖχος ἁλίσκοιτο, τοῦτ' ἀντέχοι.*

Quote a similar operation in a famous Roman siege.

(*b*) νομοθέτας καθίσατε. ἐν δὲ τούτοις τοῖς νομοθέταις μὴ θῆσθε νόμον μηδένα (εἰσὶ γὰρ ἱκανοὶ ὑμῖν), ἀλλὰ τοὺς εἰς τὸ παρὸν βλάπτοντας ὑμᾶς λύσατε.

(*c*) ὑμεῖς δ' ὁ δῆμος ἐκνενευρισμένοι καὶ περιῃρημένοι χρήματα καὶ συμμάχους ἐν ὑπηρέτου καὶ προσθήκης μέρει γεγένησθε, ἀγαπῶντες ἐὰν μεταδιδῶσι θεωρικῶν ὑμῖν ἢ Βοηδρόμια πέμψωσιν οὗτοι.

6. History.

Answer any *two* of the following:—

(*a*) Point out the differences between the geographical conformation of Greece and that of Italy, and trace their influence upon the history and character of the two races.

(*b*) Give a brief account of the educational system of Lycurgus, and contrast it with that prevailing at Athens in the 5th century B.C.

(*c*) Sketch the rise of the naval power of the Greeks, showing what states successively held the preponderance at sea.

(*d*) Compare the pecuniary and military resources of Athens at the commencement of the Peloponnesian war and in the time of Demosthenes.

7. Literature.

Answer any *one* of the following:—

(*a*) Illustrate from the Homeric poems the primitive character of the society there described, in respect of political organisation and of domestic life and manners.

(*b*) What prominent characteristics of the genius of Euripides are illustrated by the *Hippolytus*? Was the story of Hippolytus known to Homer?

(*c*) Write a brief life of Thucydides.

(*d*) Draw a plan of a Greek theatre. What various views have been recently advanced as to the existence of a stage?

SECOND PAPER.

WEDNESDAY, *5th April* 1899.—11.30 A.M. *to* 1.30 P.M.

1. For Greek Prose:—

I presume I am one of that small section of the House to whom the Hon. gentleman who has just spoken has referred, when he alluded to the small party who objected to the policy by which this country has arrived at the "triumphant position which it now occupies." In coming forward to speak on this occasion I may be told that I am like a physician proposing to prescribe to-day for a man who died yesterday, and that it is of no use to insist upon views which the Government and the House have already determined to reject. I feel, however, that we are entering upon a policy which may affect the fortunes of this country for a long time to come, and I am unwilling to lose this opportunity of explaining wherein I differ from the course which the Government has pursued, and of clearing myself from any portion of the responsibility which attaches to those who support the policy which the Government has adopted.—BRIGHT.

2. For Unseen Translation:—

τῷ δὲ πλούτῳ ἃ ἕπεται ἤθη, ἐπιπολῆς ἐστιν ἰδεῖν ἅπασιν· ὑβρισταὶ γὰρ καὶ ὑπερήφανοι, πάσχοντές τι ὑπὸ τῆς κτήσεως τοῦ πλούτου· ὥσπερ γὰρ ἔχοντες ἅπαντα τἀγαθὰ οὕτω διάκεινται. ὁ δὲ πλοῦτος, οἷον τιμή τίς ἐστι τῆς ἀξίας τῶν ἄλλων· διὸ φαίνεται πάντα ὤνια εἶναι αὐτοῦ. ἅμα δὲ καὶ εἰκότως τοῦτο πάσχουσι· πολλοὶ γάρ εἰσιν οἱ δεόμενοι τῶν ἐχόντων. ὅθεν καὶ τὸ Σιμωνίδου εἴρηται περὶ τῶν σοφῶν καὶ πλουσίων πρὸς τὴν γυναῖκα τὴν Ἱέρωνος ἐρομένην πότερον γενέσθαι κρεῖττον πλούσιον ἢ σοφόν· πλούσιον εἰπεῖν· τοὺς γὰρ σοφοὺς ἔφη ὁρᾶν ἐπὶ ταῖς τῶν πλουσίων θύραις διατρίβοντας. καὶ ὡς ἐν κεφαλαίῳ, ἀνοήτου εὐδαίμονος ἤθους ὁ πλοῦτός ἐστι. διαφέρει δὲ τοῖς νεωστὶ κεκτημένοις καὶ τοῖς πάλαι τὰ ἤθη τῷ ἅπαντα μᾶλλον καὶ φαυλότερα τὰ κακὰ

ἔχειν τοὺς νεοπλούτους· ὥσπερ γὰρ ἀπαιδευσία πλούτου ἐστὶ τὸ νεόπλουτον εἶναι. καὶ ἀδικήματα ἀδικοῦσιν οὐ κακουργικα, ἀλλὰ τὰ μὲν ὑβριστικὰ τὰ δὲ ἀκρατευτικά.

SPECIAL EXAMINATION IN GREEK

FOR

CANDIDATES FOR HONOURS IN MENTAL PHILOSOPHY

Who have not included Greek as a subject in the Examinations for the Ordinary Degree of M.A.

WEDNESDAY, 12*th October* 1898.—11.30 A.M. *to* 1.30 P.M.

1. Passages from set books for translation into English :—

ARISTOTLE, *Nic. Ethics*, I. :

1096 *a* 17, οἱ δὴ . . . ἰδέα, 1096 *a* 23.

1102 *a* 23, θεωρητέον . . . παρόν, 1102 *a* 32.

PLATO, *Republic*, VII. :

518 A, ἀλλ' εἰ . . . ἠκούσῃ, 518 B.

525 B, προσῆκον . . . οὐσίαν, 525 C.

2. Unseen passage for translation into English :—

PLATO, *Euthyphro* :

12 E, τοῦτο τοίνυν . . . ποιεῖ; 13 C.

RHETORIC AND ENGLISH LITERATURE.

FIRST PAPER.

SATURDAY, 1*st April* 1899.—11.30 *to* 1.30 *o'clock.*

1. Write an Essay on any *one* of the following subjects :—

(*a*) The Life and Writings *either* of Addison *or* of Pope.

(*b*) The Poetry of Nature in Gray and Keats compared.

(*c*) Spenser as a master of verse, language, and imagery.

2. Describe the general effect of the Norman invasion on the English Language, and quote *ten* of the most characteristic words that it introduced.

3. Quote or formulate any definitions of Rhetoric in the wider sense. State precisely what is implied in the bad meaning of the word.

4. What are the chief formal and rhetorical differences between the Prose of Milton and that of Addison?

5. Give a short account and estimate of any *four* of the following:—*The Complaint of Deor*—*The House of Fame*—Mandeville's *Voyages*—*Morte d'Arthur*—*The Shepherd's Calendar*—*The New Atlantis*—*Religio Medici*—*A Tale of a Tub*—*Amelia*—*The Task*—*The Prelude*—*Sartor Resartus*—*In Memoriam.*

6. Note the chief work and characteristics (adding dates) of *one* writer out of *each* of the following groups:—(*a*) King Alfred, Richard Hooker, Samuel Johnson, Thomas de Quincey; (*b*) Christopher Marlowe, Thomas Otway, Richard Brinsley Sheridan; (*c*) Robert Henryson, Robert Fergusson, Thomas Parnell, Thomas Lovell Beddoes.

7. Narrate in the broadest lines, giving a few leading names, the history of the English Drama from the closing of the theatres in 1642 till the end of the Eighteenth Century.

SECOND PAPER.

SATURDAY, 1*st April* 1899.—2 *to* 4 *o'clock.*

[*N.B.—Not less than* SIX, *or more than* EIGHT, *questions should be attempted.*]

1. "But near him thy angel
Becomes a fear, as being o'erpower'd; therefore,
Make space enough between you."

Explain the meaning of these words, stating their source; and discuss Shakespeare's treatment of the character of Antony.

2. Discuss the difficulties that may be held to divide the sympathies of the reader in *The Merchant of Venice* and in *Antony and Cleopatra.*

3. Illustrate the narrative and descriptive powers of Chaucer.

4. Specify Spenser's peculiar conception of Justice, and the various allegorical ways in which he embodies it.

5. Annotate summarily :—

(*a*) "Nor had they yet among the sons of Eve
Got them new names."

(*b*) "Since, by fate, the strength of Gods,
And this empyreal substance, cannot fail."

(*c*) "Titan, Heaven's first-born,
With his enormous brood."

(*d*) "The Moon
Sits arbitress, and nearer to the Earth
Wheels her pale course."

(*e*) "He had been else a mere artificial Adam, such an Adam as he is in the motions."

(*f*) "We can grow ignorant again, brutish, formal, and slavish, as ye found us; but you then must first become that which ye cannot be, oppressive, arbitrary and tyrannous, as they were from whom ye have freed us."

6. Mention some prominent results of Milton's devotion to the classics in the first book of *Paradise Lost.* Comment on any episodes.

7. Enumerate the kinds of periodical article in which Addison specially excels. Discriminate their excellences, and refer to examples.

8. Repeat and appraise the views of Pope upon poetical license, onomatopœic verse, and "true wit"; also upon Aristotle's *Poetics*, Longinus, and "Appius."

9. Write down the argument of the *Progress of Poesy*, and remark on its literary attitude and its inherent merits as a poem.

10. Point out the chief literary influences that moulded the maturer genius of Keats.

11. What are the principal metres and metrical gifts to be found in the poems of Browning that you have studied?

12. State succinctly the ruling idea in any *four* of the following poems:—*Memorabilia*—*Prospice*—*My Star*—*Love among the Ruins*—*A Grammarian's Funeral*—*Rabbi ben Ezra.*

13. Annotate briefly any *nine* of the following:—"What mister wight"—"baffuld and his armes unherst"—"with ugly craples"—"resolved to observe an exact neutrality between the Whigs and Tories"—"large recruits of needful pride"—"the Attic warbler"—"herd wind slowly"—"I saw parch'd Abyssinia rouse"—"the gold clouds metropolitan"—"a peak in Darien"—"Just for a handful of silver"—"Ulpian serves his need"—"Illum Juda Leonem de Tribu" "Shylock's bridge."

FRENCH.

FIRST PAPER.

SATURDAY, *8th April* 1899.—9 *to* 11 A.M.

I. Translate into English:—

(*a*) Chose inouïe! il vient de grincer un sourire.
Un sourire insondable, impénétrable, amer.
C'est que la vision de son armée en mer
Grandit de plus en plus dans sa sombre pensée;
C'est qu'il la voit voguer par son dessein poussée,
Comme s'il était là, planant sous le zénith;
Tout est bien; l'océan docile s'aplanit,
L'armada lui fait peur comme au déluge l'arche;
La flotte se déploie en bon ordre de marche,

Et, les vaisseaux gardant les espaces fixés,
Échiquier de tillacs, de ponts, de mâts dressés,
Ondule sur les eaux comme une immense claie.
Ces vaisseaux sont sacrés, les flots leur font la haie ;
Les courants, pour aider ces nefs à débarquer,
Ont leur besogne à faire et n'y sauraient manquer.

VICTOR HUGO.

(*b*) Des oiseaux aux grands pieds pendants s'élancent des roseaux, allongeant sur le ciel leur bec pointu ; d'autres, larges et lourds, passent d'une berge à l'autre d'un vol pesant ; d'autres encore, plus petits et rapides, fuient au ras du fleuve, lancés comme une pierre qui fait des ricochets. Les tourterelles, innombrables, roucoulent dans les cimes ou tournoient, vont d'un arbre à l'autre, semblent échanger des visites d'amour. On sent que partout autour de cette eau profonde, dans toute cette plaine jusqu'au pied des montagnes, il y a encore de l'eau, l'eau trompeuse, endormie et vivante des marais, les grandes nappes claires où se mire le ciel, où glissent des nuages et d'où sortent des foules éparses de joncs bizarres, l'eau limpide et féconde où pourrit la vie, où fermente la mort, l'eau qui nourrit les fièvres et les miasmes, qui est en même temps une sève et un poison, qui s'étale, attirante et jolie, sur les putréfactions mystérieuses. L'air qu'on respire est délicieux, amollissant et redoutable. Sur tous ces talus qui séparent ces vastes mares tranquilles, dans toutes ces herbes épaisses grouille, se traîne, sautille et rampe le peuple visqueux et répugnant des animaux dont le sang est glacé. J'aime ces bêtes froides et fuyantes qu'on évite et qu'on redoute ; elles ont pour moi quelque chose de sacré.

MAUPASSANT.

(*c*) Il semble à trois gredins, dans leur petit cerveau,
Que pour être imprimés et reliés en veau,
Les voilà dans l'État d'importantes personnes ;
Qu'avec leur plume ils font les destins des couronnes ;

Qu'au moindre petit bruit de leurs productions,
Ils doivent voir chez eux voler les pensions ;
Que sur eux l'univers a la vue attachée,
Que partout de leur nom la gloire est épanchée,
Et qu'en science ils sont des prodiges fameux,
Pour savoir ce qu'ont dit les autres avant eux,
Pour avoir eu trente ans des yeux et des oreilles,
Pour avoir employé neuf ou dix mille veilles
A se bien barbouiller de grec et de latin,
Et se charger l'esprit d'un ténébreux butin
De tous les vieux fatras qui traînent dans les livres,
Gens qui de leur savoir paraissent toujours ivres ;
Riches, pour tout mérite, en babil importun ;
Inhabiles à tout ; vides de sens commun,
Et pleins d'un ridicule et d'une impertinence
A décrier partout l'esprit et la science.

MOLIÈRE.

(*d*) Imaginez la comédie aussi parfaite qu'il vous plaira ; où est celui qui, s'y rendant pour la première fois, n'y va pas déjà convaincu de ce qu'on y prouve, et déjà prévenu pour ceux qu'on y fait aimer ? Mais ce n'est pas de cela qu'il est question, c'est d'agir conséquemment à ses principes et d'imiter les gens qu'on estime. Le cœur de l'homme est toujours droit sur tout ce qui ne se rapporte pas personnellement à lui. Dans les querelles dont nous sommes purement spectateurs, nous prenons à l'instant le parti de la justice, et il n'y a point d'acte de méchanceté qui ne nous donne une vive indignation, tant que nous n'en tirons aucun profit ; mais, quand notre intérêt s'y mêle, bientôt nos sentiments se corrompent, et c'est alors seulement que nous préférons le mal qui nous est utile au bien que nous fait aimer la nature. J.-J. ROUSSEAU.

II. Enumerate the principal cycles of legends on which the the medieval epics of France were based.

III. Assign the following works to their respective authors, and characterise them in a few words:—*L'esprit des lois; Le contrat social; Phèdre; Jocelyn; Le génie du Christianisme; L'école des femmes.*

SECOND PAPER.

SATURDAY, *8th April* 1899.—11.30 A.M. *to* 1.30 P.M.

I. Translate into idiomatic French:—

(*a*) When I am in a serious humour, I very often walk by myself in Westminster Abbey; where the gloominess of the place, and the use to which it is applied, with the solemnity of the building, and the condition of the people who lie in it, are apt to fill the mind with a kind of melancholy, or rather thoughtfulness, that is not disagreeable. I yesterday passed a whole afternoon in the churchyard, the cloisters, and the church, amusing myself with the tombstones and inscriptions that I met with in those several regions of the dead. Most of them recorded nothing else of the buried person but that he was born upon one day and died upon another; the whole history of his life being comprehended in those two circumstances that are common to all mankind. I could not but look upon these registers of existence, whether of brass or marble, as a kind of satire upon the departed persons; who had left no other memorial of them but that they were born and that they died. They put me in mind of several persons mentioned in the battles of heroic poems, who have sounding names given them, for no other reason but that they may be killed, and are celebrated for nothing but being knocked on the head. ADDISON.

(*b*) The sources of the noblest rivers, which spread fertility over continents, and bear richly laden fleets to the sea, are to be sought in wild and barren mountain tracts, incorrectly laid down in maps, and rarely explored by travellers. To such a

tract the history of our country during the thirteenth century may not unaptly be compared. Sterile and obscure as is that portion of our annals, it is there that we must seek for the origin of our freedom, our prosperity, and our glory. Then it was that the great English people was formed, that the national character began to exhibit those peculiarities which it has ever since retained, and that our fathers became emphatically islanders, islanders not merely in geographical position, but in their politics, their feelings, and their manners. MACAULAY.

II. Translate into English :—

Madame de Castries étoit un quart de femme, une espèce de biscuit manqué, extrêmement petite, mais bien prise, et auroit passé dans un médiocre anneau ; ni gorge, ni menton, fort laide, l'air toujours en peine et étonné ; avec cela une physionomie qui éclatoit d'esprit et qui tenoit encore plus parole. Elle savoit tout : histoire, philosophie, mathématiques, langues savantes ; et jamais il ne paroissoit qu'elle sût mieux que parler françois ; mais son parler avoit une justesse, une énergie, une éloquence, une grâce jusque dans les choses les plus communes, avec ce tour unique qui n'est propre qu'aux Mortemarts ; aimable, amusante, gaie, sérieuse, toute à tous, charmante quand elle vouloit plaire, plaisante naturellement avec la dernière finesse.

SAINT SIMON (*Mémoires*).

III. Explain the difference in meaning between the following French and English words, and illustrate these differences by short sentences :—injure—injury ; spirituel—spiritual ; état—state ; meurtrir—murder ; nouvelle—novel ; plaisant—pleasant ; fastidieux—fastidious ; endurer—endure.

IV. Trace historically the Germanic element in the French language and give illustrative examples.

ESSAY.

SATURDAY, *8th April* 1899.—2 *to* 3 P.M.

Write an Essay in French on any *one* of the following subjects:—

1. "The literature of the 17th century in France marks the triumph of the principle of authority over the principle of liberty, of the principle of sociability over the principle of individualism."

2. In what sense is it true that Molière is the poet of naturalism? Demonstrate that the *naturam sequi* is the inspiration alike of *Le Malade imaginaire*, of *Tartufe*, of *L'Avare*, of *Les Femmes Savantes*, and of *Le Bourgeois Gentilhomme*.

3. "If all the year were playing-holidays
To sport would be as tedious as to work."

GERMAN.

FIRST PAPER.

MONDAY, 10*th April* 1899.—9 *to* 11 A.M.

1. Translate into English:—

(*a*) Denn in ganzer, ungeſchlachter Größe trat dies Volk in den Geſichtskreis der Alten. Es war ein Stammesauszug, kein Kriegszug abenteuernder Recken; langſam bewegte er ſich daher im nie endenden Troß der Frauen und Kinder, Herden und Hunde, in rohen Zeltwagen und gekoppelten Pferden: ſechs Tage lang ſollen allein die Teutonen an Marius' Lager vorübergezogen ſein. Aus dem Fremdartigen des ganzen Bildes hob ſich für den kriegsgeſchulten Blick der Römer der Rieſenleib der Krieger, das trotzige Kampfesauge der lebensfriſchen Weiber; die alten Frauen aber, graubarige Prieſterinnen, zogen weißgekleidet dahin, ehern den ermattenden Körper und ſein Linnengewand gegürtet, und ſchlugen während des Sturmes der

Feldschlacht dröhnend die lederne Bedachung der Wagen zur Abwehr schädlicher Geister. Und dies furchtbare Volk trat zugleich naiv in die reichgestaltete Welt Italiens . . . zwar mochten sie dunkle Kunde haben von den Schätzen und Genüssen der Mittelmeerländer: manch edles Erzeugnis italischer Metallbereitung hatte längst seinen Weg zur Elbe und Oder gefunden. Aber es kümmerte sie nicht. Mit dem Idealismus, der späterhin den Parzival Wolframs, diesen deutschen Typus des mittelalterlichen Menschen auszeichnet, der auch heute noch nicht auf deutscher Erde erstorben ist, halten sie fest an ihrer einfachen, ursprünglichen Forderung: sie wollen Land . . . Sie fordern es aus Not, um Gotteswillen, sie sind bereit, zum Entgelt zu dienen und die Schlachten einer ihnen fremden Welt politischer Interessen zu schlagen. Land ist das Wort, das immer wieder antönen wird in der endlosen Reihe deutscher Wanderungen, das dem Römer bald furchtbarer klingen soll, als das pöbelhafte Panem et Circenses der Heimat. LAMPRECHT.

(*b*) O Spatzenkopf! Wo nichts heraus zu verhören ist, da verhört man hinein. Ehrlichkeit macht unbesonnen, auch wohl trotzig. Da fragt man erst sachte weg, und der Gefangne ist stolz auf seine Unschuld, wie sie's heißen, und sagt alles geradezu, was ein Verständiger verbärge. Dann macht der Inquisitor aus den Antworten wieder Fragen und paßt ja auf, wo irgend ein Widersprüchelchen erscheinen will; da knüpft er seinen Strick an; und läßt sich der dumme Teufel betreten, daß er hier etwas zu viel, dort etwas zu wenig gesagt, oder wohl gar aus Gott weiß was für einer Grille einen Umstand verschwiegen hat, auch wohl irgend an einem Ende sich hat schrecken lassen, dann sind wir auf dem rechten Weg! Mit mehr Sorgfalt suchen die Bettelweiber nicht die Lumpen aus dem Kehricht, als so ein Schelmenfabrikant aus kleinen, schiefen, verschobenen, verrückten, verdrückten, geschlossenen, bekannten, geleugneten Anzeigen und Umständen sich endlich einen strohlumpenen Vogelscheu zusam-

menkünſtelt, um wenigſtens ſeinen Inquiſiten in effigie hängen zu können. GOETHE.

(*c*) Wie wenn die Meeresflut zum hallenden Felſengeſtad' her
Wog' an Woge ſich ſtürzt, vom Zephyros aufgewühlet,
Weit auf der Höhe zuerſt erhebt ſie ſich, aber anjetzo,
Laut am Lande zerplatzt, erdonnert ſie, und um den Vorſtrand
Hänget ſie krumm aufbrandend und ſpeit von ferne den Salzſchaum:
Alſo zogen gedrängt die Danaer, Haufen an Haufen,
Raſtlos her in die Schlacht. Es gebot den Seinen ein jeder
Völkerfürſt; ſtill gingen die anderen (keiner gedächt' auch,
Solch ein großes Gefolg' hab' einen Laut in dem Buſen)
Erfurchtsvoll verſtummend den Königen; jegliche Heerſchar
Hell von buntem Geſchmeid', in welches gehüllt ſie einherzog.
Trojas Volk, wie die Schafe des reichen Manns in der Hürde
Zahllos ſtehn und mit Milch die ſchäumenden Eimer erfüllen,
Blökend ohn' Unterlaß, da der Lämmer Stimme gehört wird:
Alſo erſcholl das Geſchrei im weiten Heere der Troer;
Denn nicht gleich war aller Getön, noch einerlei Ausruf;
Vielfach gemiſcht war die Sprach', und mancherlei Stammes die Völker. HOMER (*Voss*).

What is characteristically Homeric in these lines?

What peculiarities of German make it suitable for the translation of Homer?

(*d*) Die ungeſtüme Preſſerin, die Not,
Der nicht mit hohlen Namen, Figuranten
Gedient iſt, die die That will, nicht das Zeichen,
Den Größten immer aufſucht und den Beſten,
Ihn an das Ruder ſtellt, und müßte ſie ihn
Aufgreifen aus dem Pöbel ſelbſt – die ſetzte dich
In dieſes Amt und ſchrieb dir die Beſtallung.

Denn lange, bis es nicht mehr kann, behilft
Sich dies Geſchlecht mit feilen Sklavenſeelen
Und mit den Drahtmaſchinen ſeiner Kunſt —
Doch wenn das Äußerſte ihm nahe tritt,
Der hohle Schein es nicht mehr thut, da fällt
Es in die ſtarken Hände der Natur,
Des Rieſengeiſtes, der nur ſich gehorcht,
Nichts von Verträgen weiß und nur auf ihre
Bedingung, nicht auf ſeine, mit ihm handelt.

On what occasion, by whom and to whom, are these words spoken?

What is the metre?

(*c*) [*Candidates may take either* (1) *or* (2), *but must answer all the questions appended.*]

(1) Da ſteht er nun am Fuß der aufgebirgten Zacken!
Sie liegen vor ihm da wie Trümmer einer Welt:
Ein Chaos ausgebrannter Schlacken,
In die ein Feuerberg zuletzt zuſammenfällt,
Mit Felſen untermiſcht, die, tauſendfach gebrochen,
In wilder, ungeheurer Pracht
Bald tief bis ins Gebiet der alten finſtern Nacht
Herunter dräun, bald in die Wolken pochen.

(2) Hier bahnet nur Verzweiflung einen Weg!
Oft muß er Felſen an ſich mit den Händen winden,
Oft, zwiſchen ſchwindligtiefen Schlünden,
Macht er, den Gemſen gleich, die Klippen ſich zum Steg;
Bald auf dem ſchmalſten Pfad verrammeln Felſenſtücke
Ihm Weg und Licht, er muß, ſo müd' er iſt, zurücke;
Bald wehrt allein ein Strauch, den mit zerrißner Hand
Er fallend noch ergreift, den Sturz von einer Wand.

Who is the author of these lines?

Describe briefly the situation to which they refer.

Comment upon the metrical form.

2. Answer *two* of the following questions, of which (*a*) must be one?

(*a*) "So waren wir denn an der Grenze von Frankreich, alles französischen Wesens auf einmal bar und ledig. Ihre Lebensweise fanden wir zu bestimmt und zu vornehm, ihre Dichtung kalt, ihre Kritik vernichtend, ihre Philosophie abstrus und doch unzulänglich, so dass wir auf dem Punkte standen, uns der rohen Natur wenigstens versuchsweise hinzugeben, wenn uns nicht ein anderer Einfluss schon seit langer Zeit zu höheren, freieren und eben so wahren als dichterischen Weltansichten und Geistesgenüssen vorbereitet und uns erst heimlich und mässig, dann aber immer offenbarer und gewaltiger beherrscht hätte." Comment upon this passage and Goethe's view of French literature and civilisation as expressed in Book xi. of *Dichtung und Wahrheit*. What does he mean by 'rohe Natur'? What was the 'anderer Einfluss'?

(*b*) What would you call romantic in Wieland's *Oberon*, in Kleist's *Kathchen von Heilbronn*, in Goethe's *Egmont*, in Schiller's *Wallenstein*, and in Goethe's *Faust*?

(*c*) Lessing said: "der Nationalcharacter des Deutschen ist keinen haben zu wollen?" In what sense does the history of modern German literature bear out that statement?

SECOND PAPER.

MONDAY, 10*th April* 1899.—11.30 A.M. *to* 1.30 P.M.

I. Translate into idiomatic German:—

(*a*) Dr. Johnson delighted in his own partiality for Oxford; and one day, at my house, entertained five members of the other University with various instances of the superiority of Oxford, enumerating the gigantic names of many men whom it had produced, with apparent triumph. At last I said to him, "Why, there happen to be no less than five Cambridge men in

the room now." "I did not," said he, "think of that till you told me; but the wolf don't count the sheep."—PIOZZI.

(*b*) That nameless Unrest, the blind struggle of a soul in bondage, that high, sad, longing Discontent, which was agitating every bosom, had driven Goethe almost to despair. All felt it: he alone could give it voice. And here lies the secret of his popularity; in his deep, susceptive heart he felt a thousand times more keenly what everyone was feeling; with the creative gift which belonged to him as a poet, he bodied it forth into visible shape, gave it a local habitation and a name, and so made himself the spokesman of his generation.—CARLYLE.

(*c*) As soon as the sermon is finished, nobody presumes to stir till Sir Roger is gone out of the church. The knight walks down from his seat in the chancel between a double row of his tenants, that stand bowing to him on each side; and every now and then inquires how such a one's wife, or mother, or son, or father do, whom he does not see at church; which is understood as a secret reprimand to the person that is absent.—ADDISON.

II. Translate into English *either* (*a*) or (*b*), and answer the questions appended to both:—

(*a*) Dô Friderîch ûz Ôsterrîche alsô gewarp,
dêr an der sêle genas und im der lîp erstarp,
dô fuorte er mînen kranechen trit in d'erde.
Dô gieng ich slîchent als ein pfâwe, swar ich gie,
das houbet hanhte ich nider unz ûf mîniu knie;
nû rihte ab ich ez ûf nâch vollem werde.
Ich bin vil wol ze fiure komen,
mich hât daz rîche und ouch diu krône an sich genomen.
wol ûf, swer tanzen welle nâch der gîgen!
mir ist mîner swære buoz:
êrste wil ich eben setzen mînen fuoz
und wider in ein hôhgemüete stîgen.

Comment upon this poem and the circumstances of Walther's life which it refers to.

(*b*) Owê daz wîsheit unde jugent,
des mannes schœne noch sîn tugent
niht erben sol, sô ie der lîp erstirbet!
Daz mac wol klagen ein wîser man,
der sich des schaden versinnen kann,
Reinmâr, waz guoter kunst an dir verdirbet!
Du solt von schulden iemer des geniezen,
daz dich des tages wolte nie verdriezen,
du'n spræches ie den frouwen wol und guoten wîbes siten.
des suln sie iemer danken dîner zungen.
und hetest niht wan eine rede gesungen:
"sô wol dir, wîp, wie reine ein nam!" — dû hetest alsô gestriten
an ir lobe, daz elliu wîp dir gnâden solten biten.

Who was Reinmâr, and what was his relation to Walther?

Indicate the principal differences in accidence between Middle High German and Modern High German, basing your remarks on the above passages.

What famous controversy does the phrase "wîp, wie reine ein nam!" remind you of?

III. Rewrite the following passage in Modern German Prose:—

Ain feſte burg iſt vnſer Gott.
ain gute wör vnd waffen,
er hilfft vns frey auß aller nott,
die vns yetz hatt betroffen,
der alte böſe feyndt,
mit ernſt ers yetzt meint,
groß macht vnd vil liſt,
ſein grawſam rüſtung iſt.
auff erd iſt nicht ſeins gleichen.

Point out the similarity in the construction of this stanza and the stanzas given from Walther.

Define Luther's position in the history of the German language.

Give briefly the argument of his Letter: An die Ratsherren aller Städte deutschen Landes.

Characterise Luther's prose style.

IV. Answer *two* of the following questions, of which (*a*) must be one:—

(*a*) Discuss briefly the influence which Lessing and Wieland have exerted on the development of classical German literature.

(*b*) What were the aims and tendencies of the school of the "Meistersänger"?

(*c*) Name the principal German court epics. How do they differ in spirit and form from the great national epics?

V. Answer *one* of the following questions:—

(*a*) Discuss briefly the part played by Prussia in German history since the Thirty Years' War.

(*b*) State what you know of the constitution of the New German Empire.

ESSAY.

MONDAY, 10*th April* 1899.—2 *to* 3 P.M.

Write a short Essay in German on any *one* of the following subjects:—

1. Goethe in Strassburg.
2. Vorbedeutungen, Ahnungen und tragische Ironie in Schiller's *Wallensteins Tod*.
3. Uhland als Balladendichter.

SANSKRIT.

WEDNESDAY, 29*th March* 1899.—9 *to* 11 *o'clock*.

I. Translate into English:—

1. *Hitopadeśa* (Johnson, 1847), I., lines 241-261.
2. Do. I., verses 10, 15, 60, 82, 96.
3. *Nala*, iv. 1-7.
4. Do. ix. 1-7.

II. 1. Nom. singular; Nom. and Acc. plural of *aśman* (m.), *sāman* (n.), *yuvan* (m.), *śvan* (m.), *sakhi* (m.), *vidvas* (m.).

2. Instr., Gen., loc. singular of *kanyā*, *tanu* (f.), *tanū* (f.), *sakhī* (f.), *strī* (f.), *jāti* (f.).

3. Dat., abl., loc. singular, and gen. plural of *aham*, *idam* (m.f.), *kiṃcid* (m.f.).

4. Third singular and plural Present Indicative and Imperfect Parasmaipada of *pā* (1), *śru* (5), *brū* (2), *bhṛi* (3); and the same persons and tenses Ātmanepada of *śī* (2).

5. First and second singular Optative, and second singular Imperative, Parasmaipada and Ātmanepada of *nah* (4), *jñā* (9), *kṛi* (8), *bhid* (7), *vid* (2).

6. Third singular and plural Perfect and Aorist Paramaipada of *muc*, *vap*, *dhā*, *tap*, *bhū*, *gam*.

7. Infinitive and Past participle of *dā*, *muc*, *chid*, *vac*, *gam*, *tyaj*.

WEDNESDAY, *29th March* 1899.—1 *to* 3 *o'clock*.

1. Translate into Sanskrit:—

Meanwhile the Crow, seeing that the Deer had not returned in the evening, and looking about for him here and there, observed him in the condition described, and said, "My friend, what is the matter?" "This," replied the Deer, "is the consequence of one's rejecting a friend's counsel." "Where is the Jackal?" asked the Crow. "There he stands," replied the Deer, "in the thin clump of trees, eager for my flesh." "Friend, I told you as much before," said the Crow. Then, fetching a deep sigh, he exclaimed, "O cheat, what have you done, you miscreant!" Now, early next morning the Crow espied the owner of the field coming to the spot, stick in hand. On seeing him he said, "Friend Deer, keep quiet, and assume the appearance of one dead, filling your belly with wind, and

stiffening your legs: as soon as I utter a caw, you will quickly get up and run away." So the Deer, in accordance with the Crow's advice, remained in that very condition. Thereupon he was observed by the owner of the field whose eyes expanded with joy; but on seeing the Deer in that condition, he exclaimed, "Ah, he has died of himself"; so freeing the Deer from its snares, he busied himself in taking up the cords. When, thereupon, the owner of the field was some little distance away, the Deer, hearing the Crow's cry, got up in haste and made off. So the farmer flung his stick at him; but by the blow of the latter, as thrown by him, the Jackal was killed.

2. (1) State briefly what you know of *Patañjali*, *Bāṇa*, *Māgha*, *Yājñavalkya*, *Vālmīki*, *Śaṅkara*.

(2) Describe shortly each of the following works, giving the name of the author when known:—*Amarakosha*, *Kirātārjunīya*, *Kaushītakibrāhmaṇa*, *Chāndogyopanishad*, *Mālatīmādhava*, *Mugdhabodha*, *Mudrārākshasa*, *Mṛicchakaṭikā*, *Yajurveda*, *Rājataraṅgiṇī*, *Harshacarita*.

ARABIC.

FIRST PAPER.

TUESDAY, 28*th March* 1899.—10 A.M. *to* 12 NOON.

1. (*a*) Translate Bruennow, *Chrestomathy*, p. 5, lines 7-14.

(*b*) Parse أنيا l. 7; give the syntax of the accusative واحدًا l. 8; explain the vowel of the suffix in كرسيّه l. 8.

2. Translate Bruennow, p. 52, l. 13 to p. 53, l. 5.

3. (*a*) Translate Qur'an III., ٦٠ (60) to ٦٩ (69).

(*b*) Write a short note on (1) حذيفًا (٦.) and (2) أهل الكتاب (٦٢).

(*The above extracts were submitted to the Candidate in the printed books.*)

4. (*a*) Distinguish between nouns Diptote and Triptote. What classes of Nouns belong to the former group? Give examples of the three most common Broken Plurals. Write the plural of بنْت and يوْم.

(*b*) Give the rules for the vocalisation of the imperfect active of the Stems II.-VIII. inclusive. Write the 3rd sing. masc. Imperf. I. of رَأَى; the 2nd sing. masc. and fem. imperative of قَالَ; why do we write اقْتُلْ *without*, and اقْتَلْ *with* hamza?

5. (*a*) Relate the outstanding events of Abu Bekr's Caliphate.

(*b*) Give a sketch of the Arab conquest of Syria.

SECOND PAPER.

TUESDAY, 28*th March* 1899.—2 *to* 4 P.M.

1. Translate:—

الضيم

(*A short essay on clouds in easy unpointed prose, submitted to Candidate in the printed book.*)

2. Render into Arabic (partially vocalised):—

A poor widow came to Sultan Sulaimân and complained that his soldiers had stolen a sheep and a goat on which she depended for her living. When the Sultan replied that he could not help her, and asked why she had slept instead of watching her property, the woman answered: "I slept in peace because I believed that Sulaimân kept watch over the property of his

subjects. The Sultan was silenced, and gave orders that the value of her loss should be paid to her. As a soldier he was far-seeing and resolute, in his home government he was sometimes wanting in care for his people's welfare.

CELTIC.

FIRST PAPER—OLD GAELIC.

WEDNESDAY, 29*th March* 1899.—9 *to* 11 *o'clock.*

1. Translate into English :—

Fecht and din luid in rectaire matain moch corra lai cor imma tech-som, co n-accai in lanamain ina cotlud. Dochuaid arsin co ro dúsig in ríg. Ní fúaram-ni, or se, mnai do dingbala-so cosindiu. Ata i fail Nóisen maic Usnig ben dingbala ríg iarthair domuin. Marbthar fochétóir Nóise ocus foad in ben let-so, ol in rectaire. Acc, or in rí, acht airg-siu dia guidi dam-sa cech laa fochlith. Do gníther ón. A n-atbered imorro in rectaire chaidche fria-si, adféded si dia celiu in n-aidchi sin fochetóir. Uair na ro étad uadi, no crálta for maccaib Uisnig dul i n-gabthib ocus i cathaib ocus i n-drobelaib, ardaig co rommarbtaís. Araide batar sonairte seom im cach n-imguin, connar étad ní dóib asna amsib sin.

2. Give an abstract of the *Longes Mac n-Usnig*, and write a brief note on the place of the Tale in Gaelic Literature.

3. Translate into Old Gaelic :—

"I hear the cry of an Irishman," says Naoise. "Nay, not alike are the cry of an Irishman and the cry of a Scotsman," says Deirdre. They all heard Fergus's cry afterwards. Then Deirdre told her husband that she knew the cry from the first. "Why did you conceal it from us," said Naoise. "I had a dream last night," replied the lady, "to wit, that three birds

came to us and left three mouthfuls (bolgam) of honey with us, and took three mouthfuls of our blood away with them."

4. Write out in full the Article in Old and in Modern Gaelic.

5. "ó roboi dá lá ocus dí aidchi forsan muir, conacci a dochum in fer isin charput tarsan muir. Canait in fer hísin dano trichait rand n-aile dóu."

Translate these sentences, and indicate the age of the extract by reference to its orthography and flexion.

6. "Luid iarom Colum cille fecht n-ann gu rígh Cruithnech .i. gu Bruidhi mac Milcon, 7 do dúnadh dorus an dúnaidh fris, 7 do foscuil focétoir glais iarnuidhi an baili tre urnaigthi Coluim cille. Tainic iarsin mac in rígh .i. Mael-cu 7 a *drui* do frithtagra fri Colum cille tre *geinntlidhecht*, 7 atbathatair focétoir tre *bréithir* Coluim cille mac in rígh 7 a drui maille fris. Romóradh ainm Dé 7 Coluim cille tríd sin."

Translate this passage, adding a short note on the words in italics.

7. Name three classical epic poems rendered into Gaelic, and the MSS. in which they are found. Describe the general character of these versions, and estimate their literary value.

SECOND PAPER—MODERN GAELIC.

WEDNESDAY, 29*th March* 1899.—11.30 A.M. *to* 1.30 P.M.

1. Translate into English :—

Sìth do t'anam, a rìgh nan còrn,
Thuirt Suaran nan donn sgiath,
An sìth 's tu aiteal an earraich,
An còmhrag 's tu carragh 's an stoirm :
Glacsa mo làmh ann an càirdeas,
A rìgh nan lann o Shelma fhuair,
Agus thugadh do bhàird chòrr

Do bhròn na mairbh air a' chluain ;
Cuireadh Eirinn fo ùir mo shlòigh :
Tog clachan an cliù air cruaich.
Chi muinntir nam marbh o thuath
A' chluain 's na chuireadh an cath.
Their sealgair 's e tearnadh o'n bheinn,
'N uair dh' aomas e fein air uaimh,
'N so Fionnghal is Suaran, na tréin,
Chuir còmhrag nan ceud air sluagh.

2. Translate into English :—

"Air ghràdh t'éinich, a Phàdruig, na fàg-sa na daoine,
Gun fhios do Rìgh néimhe, beir a steach na Féinnidh."
"Ge beag a' chuil chrònanach, no an dad o'n ghath ghréine,
Gun fhios do'n Rìgh mhòrdhalach, ni rach fo bhil' a sgéithe."
"Ni h-e sin do Mhac-Cumhaill, rìgh maith bhi air na Fiannaibh,
Rachdais fir an domhain 'na thigh uile gun iarraidh."

3. What inference as to the authenticity of Macpherson's "Ossian" would you draw from a comparison of these two passages (1 and 2) ; and, in general, from a comparison of Macpherson's Gaelic with the "Ossianic" Ballads published since Macpherson's time ?

4. Translate into modern Gaelic (Scotch or Irish) :—

His writings were voluminous. They pretended to no profundity, but they had to be read ; you could not put them down. Perhaps his best books were those which aimed at being helps to devotion and consolation. There must be many persons who are grateful to him, though they never saw his face. Few men of his time mixed with so many notables. St. Andrews is a sort of intellectual and aristocratic rendezvous, and every one was glad to meet the "Country Parson." He acted as a mental tonic. One could not part from him without feeling better and brighter. An optimist, he conveyed to you the impression that he was always without care ; but at times his

power of pathos was unique. He had many critics, but his work abides. What he did, they could not have done. He was a striking personality; and let this much be said, never man lived who so fully took for granted the surety of the life to come. It was a date in his calendar as certain as the first of May. He was called, as we say, before his time, weak as he was. But he had done his day's work. The epitaph of his parishioners (and they are the best judges) is this: "A man greatly beloved." Who can say more; who that knew him would dare to say less?

5. Translate into English:—

(*a*)

Am mios lusanach, mealach,
Feurach, failleanach, blàth,
'S e gu gucagach, duilleach,
Luachrach, dìtheanach, lurach,
Beachach, seilleanach, dearcach,
Ciùrach, dealtach, trom, tlàth:
'S i mar chuirneanan daoimein
'Bhratach bhoillsgeil air làr.

Parse the last two lines of the above.

Or,

(*b*) Tar gaċ míniugaḋ d'a dtugtar ar an aisling-se, measaim gurab é is fáṫ-rún di: gurab í an ḟoṁáiġ úd an nádúir ḋaonna, 7 gurab é ċialluiġiḋ na baill éagsaṁla úd na hḟoṁáiġe, staide éagsaṁla na ndaoine; óir ciallaiġiḋ an ceann óir úd ríoġa 7 prionnsaḋa, . . . na sliasda iarnaiḋe, na cinn ḟeaḋna 7 na daoine díolṁaine bíos ag cosnaṁ 7 ag caoinna na gcríoċ, na luirgne 7 an traiġteaċ criaḋ-iaraiṁ, am pobull coiṫċeann ó ṡin amaċ.

Parse, explaining the forms, *gurab*, *gcríoċ*, *amaċ*.

6. Write a full note, comparing the use of the Article in Gaelic (Scottish or Irish) and English.

II.—MENTAL PHILOSOPHY.

LOGIC.

MONDAY, *3rd April* 1899.—9 *to* 11 A.M.

1. Discuss the relation of connotation and denotation, and consider the question whether proper names are or are not connotative.

2. What inferences may be drawn from the proposition—"All examinations are troublesome"?

By what processes are these inferences obtained?

3. State and examine the various theories of the Import of Propositions.

4. Formulate the six fundamental rules of syllogism, and show their necessity.

5. Give an account of the Joint Method of Agreement and Difference, and state precisely how it is distinguished from the Method of Difference. Illustrate the distinction.

6. Explain the function of Hypothesis in scientific enquiry. What are the conditions of a legitimate hypothesis?

7. Give a careful account of the methods of Psychology. In what respects does the character of its methods distinguish it—

(*a*) From natural sciences.

(*b*) From philosophy.

8. Explain the nature of the experiments devised to measure the *duration* of mental phenomena, and indicate the chief results obtained.

TUESDAY, *4th April* 1899.—3 *to* 5 P.M.

1. Describe as accurately as possible the meaning of the terms *unconsciousness*, *subconsciousness*, *consciousness*, *self-consciousness*. How would you state the relation of Attention to Consciousness?

2. State carefully, and critically examine, the facts and arguments adduced in support of the theory that a feeling of innervation, distinct from all sensations due to peripheral stimuli, conditions our knowledge of our own movements.

3. What are the elements involved in our perception of spatial relations? Consider their relation to one another. Discuss Berkeley's treatment of the subject.

4. Give a careful statement of the contrast between the doctrines of Parmenides and Heraclitus, and explain the relation of this contrast to the problem and theory of Plato.

5. State Descartes's arguments for the existence of God. What does he mean by saying that the idea of God is in some sense prior to the idea of Self.

6. Explain the following expressions as used by Locke:— Internal sense, simple modes, simple ideas of both sensation and reflection, abstraction, secondary and imputed qualities, our complex ideas of substances, substance in general.

7. In what sense does Berkeley regard the order of nature as arbitrary, and how does his belief in its arbitrariness contribute to the aim of his philosophy?

8. Give a careful account of Hume's theory of "impressions" and "ideas," and their relation to one another. What philosophical conclusions does he draw from his theory?

MORAL PHILOSOPHY.

THURSDAY, *6th April* 1899.—11.30 A.M. *to* 1.30 P.M.

1. Carefully distinguish the various phenomena to which the word "action" may properly be applied. What actions may legitimately be regarded as possessing moral quality, and why?

2. Assuming that conduct is not simply the reaction of

character on circumstances, how do you explain the prediction of actions? Compare your view with that of Mill.

3. Consider the statement that pleasure is the object of desire. To what extent is it proper to identify the pleasant and the good?

4. Critically compare the various accounts that are given of Conscience. What do you consider to be the true significance of Conscience as an element in Moral Life?

5. Illustrate Kant's tendency to make formal consistency the criterion of moral worth. How far, and in what way, does Kant himself correct this tendency?

6. Explain and examine the idea of self-realisation. How far, and in what sense, is this idea capable of furnishing a distinction between good and bad conduct?

7. Consider the relation of moral progress to the idea of absolute moral distinctions.

THURSDAY, 6*th April* 1899.—3 *to* 5 P.M.

1. Give an account of the Socratic Schools, and explain their relation to the character and teaching of Socrates.

2. Give a careful account of the four cardinal virtues recognised by Plato. How far, and in what way, does Plato give effect to the Socratic doctrine of the unity of virtue?

3. Explain what Aristotle means by well-being (εὐδαιμονία). How is it distinguished

(*a*) from pleasure?

(*b*) from virtue?

4. State carefully Hobbes's theory of Human Nature, and of the foundation and authority of morality. In what respects and with what purpose was he criticised

(*a*) by Cudworth and Clarke?

(*b*) by Shaftesbury and Hutcheson?

5. Explain carefully the relation which Butler conceives to exist between Conscience and Self-love, and between self-love and particular affections.

6. Critically examine Mill's account of the ultimate sanction of the principle of utility.

POLITICAL ECONOMY.

FIRST PAPER.

THURSDAY, 23*rd March* 1899.—2 *to* 4 *o'clock.*

(*Answer* SEVEN *questions only.*)

1. Explain the terms *Utility* and *Disutility*, so as to bring out clearly the nature of the *Production of Wealth.*

2. "Marginal utility is raised, and total utility is lessened, by any check to supply." Explain and illustrate.

3. What is the root-idea in Capital?

Illustrate your answer by reference to some of the principal species of capital.

4. State the Law of Diminishing Return to Land.

Show the importance of this Law in economic theory.

5. Examine Mill's distinction between the laws of the production and of the distribution of wealth.

6. In what ways does State Socialism propose to revolutionise the present industrial system, and on what grounds?

7. In what modes may Trade Unions affect the Real Wages (*a*) of labour generally, (*b*) of a particular class.

8. State the theory of Economic Rent, and point out the conditions which would tend to bring about a fall in economic rent.

9. Explain the nature and the causes of the growth of material capital.

10. Give an account of Mill's proposed limitations on Inheritance and Bequest.

SECOND PAPER.

FRIDAY, *24th March* 1899. 9 *to* 11 *o'clock.*

(*Answer* SEVEN *questions only.*)

1. Explain accurately the operation of Demand and Supply in determining Market Values.

2. State and explain the connection between *Normal Values*, *Factors of Production*, and *Quasi-Rents.*

3. Show the bearing of the *Quantity Theory of Money* upon (*a*) the depreciation of *Inconvertible Notes*, and (*b*) the effects of great gold discoveries.

4. What are the principal causes affecting the rate of interest on loanable capital?

5. How did the Mercantilists attempt to secure a favourable balance of trade, and on what general grounds did Adam Smith condemn this policy.

6. Why did Adam Smith disapprove of the Monopoly of the Colonial Trade?

7. Explain, with illustrations, the principle of Equality of Taxation.

8. Examine the effects of Drawbacks and of Bounties. Notice Adam Smith's views.

9. "Money no more than other commodities has its value definitely determined by demand and supply. The ultimate regulator of its value is cost of production."

Explain and criticise.

10. On what grounds are Issues of Bank Notes generally limited?

THEORY, HISTORY, AND ART OF EDUCATION.

FIRST PAPER.

FRIDAY, 31*st March* 1899.—9 *to* 11 A.M.

1. Trace the development of Mind as far as the formation of General Concepts, and relate to each stage the derived canons of method.

2. Give some account of the hygienic and cerebral conditions of mental action, and make clear the practical rules to be deduced from these.

3. Discuss the educational significance of Object Lessons with special reference to the training they afford and the material they supply. Outline a scheme for the upper primary stage.

4. Make a reasoned grouping of the materials of education in their relation to the end of Education as Ethical.

5. Justify, as Real and Formal, the claims of Language-study.

6. Discuss the place and purpose of Arithmetic in an Instruction-Plan.

7. Illustrate by specific reference the Unity of the Intellectual and the Ethical in Education, and justify it from your view of the Philosophy of Mind.

8. Take *four* of the more important Rules of Method and apply them to—

(*a*) The Teaching of Grammar; *or*
(*b*) The Teaching of Botany.

SECOND PAPER.

FRIDAY, 31*st March* 1899.—11.30 *to* 1.30 *o'clock.*

1. (*a*) "Comenius is the most penetrating writer on Method whom the world has ever seen."

(*b*) "Comenius was a person of some ingenuity and little judgment who invented a new way of learning Latin."

Examine these two estimates of Comenius as a worker in the field of Education.

2. Describe fully his "Idea of the Vernacular School"; and compare it with the scope and aim of the Primary School of to-day.

Or,

Explain briefly the following terms and passages from the *Great Didactic*:—

Certo — decuriones — generosos animos labor nutrit — harmonia morum — janua linguarum — officina hominum — pansophia — paradisus animae — qui bene distinguit, bene docet — simul et semel.

3. State and criticise Locke's views on:—(1) "The charging of children's memories, upon all occasions, with rules and precepts"; (2) "Whipping as the last remedy"; (3) "The friendship of father and son"; (4) "Curiosity in children"; (5) "Training in the virtue of Justice."

4. Describe the chief services which Pestalozzi has rendered to the cause of Education; and compare him with Rousseau in this respect.

5. Show, with sufficient illustration, how you would apply the more important rules of Method to the teaching of French.

6. Explain fully, with reference to their context, any *six* of the following passages from Locke's *Conduct*:—

(1) "From this defect I think no man is free."

(2) "He that would acquit himself in this case as a lover of truth, must do two things that are not very common nor very easy."

(3) "Labour for labour's sake is against nature."

(4) "It is a certain truth that *res nolunt male administrari*; it is no less certain, *res nolunt male intelligi*."

(5) "To obtrude terms where we have no distinct conceptions, is but an artifice of learned vanity."
(6) "I say not this to decry metaphor, or with design to take away that ornament of speech."
(7) "He that considers is a foe to orthodoxy."
(8) "*Viresque acquirit eundo.*"
(9) "A disease of the mind, as hard to be cured as any."
(10) "These are teeming truths."

THIRD OR ADDITIONAL PAPER—*Schoolmaster's Diploma only.*

FRIDAY, 31*st March* 1899.—2.30 *to* 5 *o'clock.*

1. According to Aristotle, the aim of life is "to live happily and beautifully." Show, with some fulness, how far this aim was interpreted and realised in the education of the young Athenian.

2. Describe the social position of women among the Hellenic races, and give a brief account of their education.

3. Describe the course of instruction through which the Roman youth were carried during the Romano-Hellenic period (148 B.C. onwards). Give as many particulars as you can.

4. Write a short life of Quintilian; and state and criticise his views on (1) "The instruction of children before the age of seven"; (2) "The teaching of Good Reading"; (3) "The ablest man is the best teacher."

5. Point out the chief merits of Milton's *Tractate* as a contribution to educational thought.

6. "Most of our predecessors thought only of knowledge; by a reaction, some of our New Educationists seem to despise knowledge."

Explain and discuss.

7. Discuss the claims of Jacotot to be remembered as a reformer in language-learning; and explain carefully what

Quick means by "Complete Retainers" and "Rapid Impressionists."

8. How would you treat the following passage for a lesson on matter and style to pupils of the age of 16?—

"The language I have learn'd these forty years,
My native English, now I must forego:
And now my tongue's use is to me no more
Than an unstringed viol or a harp,
Or like a cunning instrument cased up,
Or, being open, put into his hands
That knows no touch to tune the harmony:
Within my mouth you have engaol'd my tongue,
Doubly portcullis'd with my teeth and lips;
And dull unfeeling barren ignorance
Is made my gaoler to attend on me.
I am too old to fawn upon a nurse,
Too far in years to be a pupil now:
What is thy sentence then but speechless death,
Which robs my tongue from breathing native breath?'

Or,

Give, step by step, your method of leading a class to understand Simple Proportion. Illustrate your answer by examples.

A Thesis on either:—

(*a*) The Claims of History to a place in the Curriculum of an Elementary School.

Or,

(*b*) To what extent, and on what lines, should Systematic Physical Training form part of a Child's Education?

PHILOSOPHY OF LAW.

See Papers under Faculty of Law.

III.—SCIENCE.

MATHEMATICS.

WEDNESDAY, *5th April* 1899.—*3 to* 5 P.M.

1. The line which joins the middle points of the sides of a triangle is parallel to the base, and equal to half the base.

D and E are points in the sides AB, AC of a triangle such that $BD=CE$. If P and Q be the middle points of DE and BC, shew that PQ is parallel to the bisector of the angle A.

2. Find expressions for the radii of the inscribed and circumscribed circles of a triangle in terms of the area and the sides of the triangle.

ABC is a triangle, and A', B', C' three points such that $A'B$, $A'C$, $B'C$, $B'A$, $C'A$, $C'B$ are perpendicular to AB, AC, BC, BA, CA, CB respectively: shew that the triangles ABC and $A'B'C'$ are congruent.

3. Prove that the medians of a triangle trisect each other.

Shew that the area of the triangle formed by the medians of a triangle is three-fourths of the area of the triangle itself.

4. Shew that the images of the orthocentre in the sides of a triangle lie on the circumcircle.

Prove that the circumcentre, the centroid, and the orthocentre of a triangle are collinear.

5. Shew how to describe a rectilineal figure of given area similar to a given rectilineal figure.

AB is a diameter and CD a perpendicular chord of a circle. If P be any point on the circumference, shew that PC and PD meet AB in points which are harmonically conjugate with respect to A and B.

6. Define the Power of a point with respect to a circle; and find the locus of a point whose Powers with respect to two circles are equal.

Shew that the locus of the centre of a circle which cuts two other circles orthogonally is their radical axis.

Or, as an alternative,

Find the equation of the tangent at the point (x', y') on the conic $ax^2+by^2=1$.

Find the co-ordinates of the point at which the tangent makes the angle θ with the x-axis.

7. Express as a sum of partial fractions $\dfrac{3x^2-x+2}{2x^3+3x^2-1}$.

Factorise $(a+b)^3+(c+d)^3+(d+a)^3+(b+c)^3$ (i)

$x^4+4x^3+4x^2-1$ (ii)

Or, as an alternative,

Prove the theorem of Archimedes regarding the quadrature of a spherical zone.

A sphere touches a cone whose vertical angle is a right angle; shew that the circle of contact divides the area of the surface of the sphere in the ratio $3+2\sqrt{2} : 1$.

8. Give definitions of the sine and tangent of an angle which are applicable to angles of any magnitude.

Give a geometrical construction for all the angles which have a given cosine.

Solve the equation

$$\cos^3\theta-\sin\theta\cos\theta-\sin^3\theta=1.$$

9. Given two sides and the contained angle of a triangle, investigate formulae for finding the third side by logarithms without finding the other angles.

In any triangle prove that

$$\sin A=\sqrt{\{2\Sigma b^2c^2-\Sigma a^4\}}/2bc;$$

$$a^3\cos(B-C)+b^3\cos(C-A)+c^3\cos(A-B)=3abc.$$

10. Prove that the tangent at any point on a conic makes equal angles with the focal distances. What does this become in the case of a parabola?

The tangent at P meets the Latus Rectum in D and the directrix in Z; prove that $FD=eFZ$, F being the focus.

11. Shew that the locus of the middle points of a series of parallel chords of a conic is a straight line.

Prove that a central conic has a second focus and directrix.

12. Find the equation of the common chord of the two circles $x^2+y^2+2gx+2fy+c=0$, $x^2+y^2+2g'x+2f'y+c'=0$.

Find the equation of the circle whose diameter is the common chord of $x^2+y^2+y=2$, and $x^2+y^2+2x+y=3$.

Or, as an alternative,

Describe the geometrical transformation called "Reversion"; and shew that a straight line reverts into a straight line.

Revert the theorem that the angle in a circular segment is constant.

THURSDAY, 6*th April* 1899.—9 *to* 11 A.M.

1. Prove the rule for testing the accuracy of multiplication called "Casting out the Nines."

If l, m, n be integers, prove that

$$mn^2+m^2n+nl^2+n^2l+lm^2+l^2m \text{ is even.}$$

2. Shew that the remainder when

$$a_nx^n+a_{n-1}x^{n-1}+\ \ldots\ +a_1x+a_0$$

is divided by $x-\lambda$ is

$$a_n\lambda^n+a_{n-1}\lambda^{n-1}+\ \ldots\ +a_1\lambda+a_0.$$

What relation must connect a, b, c in order that

$$(x-b)(x-c)+(x-c)(x-a)+(x-a)(x-b)$$

may be exactly divisible by $x-a-b-c$; and what is the quotient when the required relation subsists?

3. Prove that every rational function of $\sqrt{p}$, $\sqrt{q}$, $\sqrt{r}$ can be reduced to the form

$$A+B\sqrt{p}+C\sqrt{q}+D\sqrt{r}+E\sqrt{q}\sqrt{r}+F\sqrt{r}\sqrt{p}+G\sqrt{p}\sqrt{q}+H\sqrt{p}\sqrt{q}\sqrt{r},$$

where A, B, C, etc., are rational so far as $\sqrt{p}$, $\sqrt{q}$, $\sqrt{r}$ are concerned.

Solve the equations

$$3x+2\sqrt{(6x)}+1=0;$$

$$\frac{x-b+c}{(x+b)(x+c)}+\frac{x-c+a}{(x+c)(x+a)}+\frac{x-a+b}{(x+a)(x+b)}=3.$$

4. Exhibit in Argand's diagram the affixes of the n^{th} roots of -1. Decompose $x^{2n}+1$ into real quadratic factors.

Factorise

(i) $x^2-xy+y^2-x-y+1$; (ii) $a^2(b^3-c^3)+b^2(c^3-a^3)+c^2(a^3-b^3)$.

5. Prove that a double root of $x^3+px^2+qx+r=0$ is also a root of the equation $3x^2+2px+q=0$: and shew that a double root of a cubic whose co-efficients are rational numbers must be real and rational.

Solve the cubic $18x^3+33x^2-28x+5=0$, which has a double root.

Solve the system

$$x^3y+xy^3-xy=8,\ 25(x^4+y^4)=17(x^2+y^2)^2.$$

6. Sum (by any method) the series

$$\cos\alpha+\cos(\alpha+\beta)+\cos(\alpha+2\beta)+\ \ldots\ +\cos(\alpha+n-1\beta).$$

Sum the series

(i) $x+2x^2+3x^3+4x^4+\ \ldots$ to n terms;

(ii) $\sin\theta+2\sin 2\theta+3\sin 3\theta+4\sin 4\theta+\ \ldots$ to n terms.

Or, as an alternative,

Find an expression for the number of permutations of n things, α of which are alike, β alike, etc.

Write down the coefficient of a^3b^2c in the expansion of

$$(a+3b+2c)^8.$$

In how many ways can 10 be thrown in three casts with a die whose faces are marked 2, 4, 6, 8, 10, 12 ?

7. Draw the graph of $y=(x^2+3x+1)/(x^2+1)$; and plot accurately the turning values of y.

Prove graphically, or otherwise, that the cubic equation $(x-1)^2x=1$ has only one real root: and calculate its value to one place of decimals.

8. Define a logarithm; and prove that the logarithm of a product is the sum of the logarithms of the factors.

Prove, by extracting the square root of 10 sufficiently often, that $\log_{10} 1{\cdot}335 = {\cdot}125$.

Or, as an alternative,

Find the equation to a straight line in the form $y=mx+c$; and interpret the constants in the equation.

If two straight lines pass through the points $(a, 0)$, $(-a, 0)$ respectively, and are inclined to each other at a given angle, α, find the equation to the locus of their intersection.

9. Define the function $\tan^{-1}x$; draw its graph; and delimit its principal branch.

Solve the equation

$$\tan^{-1}\left(\frac{x+p}{1-px}\right)+\tan^{-1}\left(\frac{x-p}{1+px}\right)=\tan^{-1}q.$$

If $\alpha+\beta+\gamma+\delta=\pi$, shew that $\sin^2\alpha-\sin^2\beta-\sin^2\gamma+\sin^2\delta$
$$=2\sin(\alpha+\beta)\cos(\beta+\gamma)\sin(\beta+\delta).$$

10. If m be any commensurable quantity positive or negative, prove that $\underset{x=1}{L}(x^m-1)/(x-1)=m$.

If $p>r$, $q>s$, find the limit when $x=1$ of

$$\{2px^p+2qx^q-(p+q)(x^r+x^s)\}/\{x^{p+q}-x^{r+s}\}.$$

11. Prove that a series whose terms are ultimately all positive is convergent or divergent according as the n^{th} root of its n^{th} term is ultimately less than 1 or greater than 1.

Discuss the convergency of the series whose n^{th} term is $(n-1)^2x^n/n!$.

Or, as an alternative,

Find the equation to the straight line through the point (x', y') perpendicular to $Ax+By+C=0$.

A and B are points on the axes of x and y respectively, and θ is the angle BAO. On the side of AB remote from the origin is described an isosceles right angled triangle APB, P being the

right angle. If $AP=BP=d$, shew that the equation to the straight line through P perpendicular to AB is

$$\sqrt{2}\cos\theta\, x-\sqrt{2}\sin\theta\, y+d\cos 2\theta=0.$$

12. Establish the Exponential Theorem.

Prove that $1+\frac{1^2x^2}{2!}+\frac{2^2x^3}{3!}+\frac{3^2x^4}{4!}+\ldots\ad\infty=(x^2-x+1)e^x$.

Or, as an alternative,

Prove that, if (x, y) be the co-ordinates of any point on a hyperbola with respect to a pair of conjugate diameters as axes, its equation takes the form $x^2/\alpha^2-y^2/\beta^2=1$.

The tangent at a point P on a hyperbola meets a pair of conjugate diameters in T and U respectively. If Q be a point such that QT and QU are parallel to these diameters, respectively, shew that the locus of Q is a curve of the fourth degree; and roughly trace it.

NATURAL PHILOSOPHY.

FIRST PAPER.

FRIDAY, *7th April* 1899.—9 *to* 11 A.M.

(*Not more than* EIGHT *questions are to be attempted.*)

1. Explain and contrast *mass*, *force*, and *weight*. If the weight of a body were halved, its mass remaining unaltered, find how far it would fall in 4 seconds.

2. Give the definition of components of a force. The force acting on a particle has five components. Four of these are 1, 2, 3, and 4 dynes respectively parallel to the sides AB, BC, CD, DA of a square. If the force is $2\sqrt{2}$ dynes in the direction AC, find the fifth component.

3. Illustrate, by instances of each, the terms Kinetic Energy and Potential Energy. Show that if a stone be thrown upwards the sum of its Kinetic and Potential Energies remains constant.

4. Show that the path of a projectile, if the resistance of the air be neglected, is a parabola, and find its focus and directrix in terms of the direction and speed at starting.

5. If three forces act on a rigid body, prove that they must meet at a point or be parallel, if they keep it in equilibrium. A uniform rod AB rests with its end A against a smooth vertical wall and makes an angle 60° with the wall. The end B is attached to a string which is fastened to a point C in the wall vertically above A. Show that $CA = \frac{1}{2}AB$.

6. What is meant by a fluid, and the terms viscous and mobile? Give examples.

An isosceles triangular disc floats in a liquid of 4 times its specific gravity. If the base be horizontal and uppermost, find its distance from the liquid.

7. Find the rate at which work could be done by water falling 40 metres if the stream at the top be 5 metres wide by two deep and flow at 3 kilometres per hour. State carefully the units in which your result is expressed. ($g = 981$ c.g.s. units.)

8. What is Boyle's Law? Describe any method of proving this law for pressures both above and below that of the atmosphere.

The air in a vessel is at 20° C. and under a pressure of 780 mm. of mercury. One quarter of the air is removed and the temperature falls to 10° C., find the new pressure.

9. Explain fully and contrast simple forms of (*a*) a telescope, (*b*) a compound microscope. Can you give any reasons why one cannot be used for the same purposes as the other?

10. Give the laws of simple refraction.

An eye looking through an ordinary prism may see two images of a bright point. Describe, with the help of a figure, how this is possible.

11. Account for the existence of dark lines and bands in certain spectra. Give instances of their use in investigations.

12. Describe one celestial and one terrestrial method of finding the speed of light.

SECOND PAPER.

FRIDAY, *7th April* 1899.—11.30 A.M. *to* 1.30 P.M.

(*Not more than* EIGHT *questions are to be attempted.*)

1. Define Force, in the sense in which the term is employed by Newton. Can any reason be assigned for regarding it as having objective reality?

2. Contrast the senses in which the word Law is used when we speak of Kepler's Laws, and of the Law of Gravitation.

3. How was it first established that light moves with finite speed?

4. Define Viscosity, and point out common phenomena which depend upon it.

5. Describe the action of a convex lens on a pencil of divergent rays, and thence show how it can be employed as a microscope. What is the "magnifying power" of a lens?

6. To what cause is the refraction of light primarily due, and how does a knowledge of that cause enable us to decide between the rival theories as to the nature of light?

7. What is meant by the "spheroidal state" of a liquid, and how is the drop supported?

8. State, in any complete form, the "Second Law" of Thermodynamics; and point out its ultimate basis.

9. Point out, generally, the nature of the effect which wind produces on the propagation of Sound.

10. Explain the action of the electrophorus, and trace the source of the energy in a conductor charged from it.

11. Give an approximate estimate of the energy set free, per square mile, in the condensation of vapour for an inch of

rain. If the process last for 24 hours, what is the average horse-power per square mile?

12. State the fundamental facts of Thermo-electricity, pointing out the sources of the energy of the current.

CHEMISTRY.

See Papers under Faculty of Medicine.

BOTANY.

TUESDAY, 28*th March* 1899.—1 *to* 3 *o'clock.*

Illustrate your Answers by Drawings.

1. Give an account of the conditions under which hairless roots, roots with root-hairs, mycorhizæ, and tubercled roots occur.

2. What are the characters which form the basis of classification in the Pteridophyta? Describe the mode of spore-formation in each class.

3. What are the anatomical and histological peculiarities of xerophytes and hydrophytes? Name representative examples in this district?

4. Mention several methods of climbing exhibited by plants. Give an example of each kind, and state the nature of the organ which it uses for climbing.

5. Describe the development of the ovule in an Angiosperm up to the stage of fertilisation, and also the development of the seed.

ZOOLOGY.

TUESDAY, *28th March* 1899.—10 *to* 12 *o'clock.*

(FOUR *Questions to be answered.*)

1. Describe the vertebral column of (1) a fish, (2) a frog, (3) a snake, and (4) a bird, and show how each is adapted to a special form of progression.

2. Distinguish between the pro- meso- and meta-nephros, and trace the fate of each and their ducts in the dogfish and frog.

3. Point out how a sessile animal (*e.g.* Phallusia) differs from a parasite (*e.g.* Taenia). What are some of the disadvantages sessile animals labour under and the steps taken to overcome them?

4. What do you understand by Mimicry? Give examples.

5. Give a short account of the Order Primates, and state where Lemurs and Anthropoid Apes are chiefly met with.

GEOLOGY INCLUDING MINERALOGY.

MONDAY, *27th March* 1899.—1 *to* 3 *o'clock.*

1. What are *breccias*? In what various ways have they been formed?

2. Give some account of the Pyroxenes, and of the part they play as rock-formers.

3. Describe the various kinds of *Joints* which are met with in sedimentary and crystalline igneous rocks.

4. Would you expect to meet with the following fossils in one and the same set of beds—*Calymene Blumenbachii*, *Stringocephalus Burtini*, *Terebratula hastata*, *Producta horrida*, *Plesiosaurus dolichodeirus*, *Siphonia pyriformis*, *Mastodon angustidens*? Give reasons for your answer.

5. Give some account of volcanic *Necks*, and illustrate your answer by sections.

6. Under what conditions were the Devonian and Old Red Sandstone accumulated?

IV.—HISTORY AND LAW.

BRITISH HISTORY.

FIRST PAPER.

MONDAY, *3rd April* 1899.—12 *to* 2 *o'clock.*

N.B.—*Not more than* SEVEN *questions to be attempted, and not more than* FOUR *questions in either Section.*

SECTION I.

1. Describe the organisation of Britain under the Romans, and illustrate by a map.

2. To what do you attribute the success of the Danes in their struggle with the English?

3. Describe and explain the relations existing between Scotland and England from 1066 to 1174.

4. Discuss the respective claims of the four Norman Kings to the English throne.

5. How did Henry I come by the name of "the Lion of Justice"? What further developments of the judicial system took place under Henry II?

6. Show how France gained at the expense of England in the reigns of John and Henry III.

7. What part was played by the Papacy in regard to the struggle of Scotland for independence, political and ecclesiastical?

SECTION II.

8. Give illustrations of the corruption and unpopularity of the Church in the fourteenth century.

9. Compare Edward II and Richard II with reference to (1) their political capacity, (2) the causes of their fall.

10. Sketch the career and discuss the character of Richard III.

11. Describe and explain the administration of affairs in Scotland during the minority of James V, *or* during that of Mary.

12. Compare the persecutions in the reigns of Henry VIII, Mary, and Elizabeth.

13. Describe the condition of Ireland in the reign of Elizabeth, and account for the various insurrections in that country.

14. Describe Elizabeth's policy with reference to Spain, and show what light it throws on her character.

SECOND PAPER.

MONDAY, *3rd April* 1899.—3 *to* 5 *o'clock.*

N.B.—*Not more than* SEVEN *questions to be attempted, and not more than* FOUR *in either Section.*

SECTION I.

1. Give an account of the proceedings of the Parliament of 1621, and explain the reasons for its hostility to the king.

2. Sketch briefly the events connected with Charles I's foreign wars, account for their failure, and show how they influenced his relations with his Parliaments.

3. Compare and contrast the movement against Charles I with that against James II.

4. Describe and explain the changes in the attitude of the Scottish people to the English Puritans from 1643 to 1653.

5. What attempts were made by Cromwell to establish a parliamentary constitution, and why did they fail?

6. What circumstances led up to the formation of the Triple Alliance of 1667, and why was that treaty broken?

7. To what do you attribute the triumph of Charles II over his opponents in the closing years of his reign?

8. Show the importance of the Bill of Rights as a landmark in English constitutional history.

SECTION II.

9. What were the leading principles of William III's continental policy? How far and through what events did it ultimately succeed?

10. What causes can you assign for the long continuance of the Whigs in office after 1714?

11. Sketch the history of the rivalry between Britain and France in America in the eighteenth century, and account for the triumph of Britain.

12. Sketch the career of Charles James Fox, and indicate his attitude to the chief questions of his time.

13. Describe and account for the growth of the British power in India from 1790 to 1820.

14. What were the causes of the discontents in the closing year of George III's reign?

15. Give a summary of the career of Daniel O'Connell, and explain the questions with which his name is associated.

16. What disputes have there been between Britain and the United States from 1800 to 1885, and how have they been settled?

CONSTITUTIONAL LAW AND HISTORY—ROMAN LAW—PUBLIC LAW.

See Papers under Faculty of Law.

ART AND ARCHÆOLOGY.

FIRST PAPER.—HISTORICAL.

FRIDAY, 31*st March* 1899.—3 *to* 5 P.M.

Not more than SEVEN *questions to be attempted.*

1. Compare the circumstances of the life of Palæolithic with those of Neolithic man, in regard to the extent to which they favoured or discouraged artistic production.

2. Give some idea of the technical skill of the Egyptians of the early dynasties in work in hard and soft stone.

3. Indicate the chief sources of our knowledge of the art of the Phœnicians; how far is it justifiable to deny to them artistic originality?

4. Write a clear description of the Eastern frieze of the Parthenon, noticing especially its central portion.

5. Give a general idea of the early Christian burial places (the Catacombs).

6. Describe carefully the mosaic decoration *either* of the Baptistry, *or* of the Church of S. Apollinare Nuovo, at Ravenna.

7. What is the most probable derivation in each case of the following features of the early Christian Church:—the atrium, the side aisles, the apse, the confessio?

8. Draw up a comparative chronological table of the chief painters of Florence and of Venice. How do you account for the comparatively late development of Venetian Art?

9. Trace the chief influences that affected the art of Mantegna, and show how in his turn he was a source of inspiration and guidance to others.

10. Describe carefully *either* the Old Testament Gate by Ghiberti, *or* the Colleone Monument at Venice.

11. In what degrees respectively do Dürer, Holbein, and Rembrandt show in their work the influence of the Reformation?

12. How does the position of Art in the France of Louis XIV differ from that it held in Florence in the 14th Century?

SECOND PAPER.—CRITICAL AND TECHNICAL.

SATURDAY, 1*st April* 1899.—9 *to* 11 A.M.

Not more than SEVEN *questions to be attempted.*

1. What are "transferred" and "copied" motives of ornament? What dangers are to be guarded against in the use of each?

2. Explain the significance and use of the Assyrian sculptured bulls, and write a critical note on them as examples of animal forms conventionalised.

3. Give a list, with dates, of the chief sculptors of the Attic School in Greece, and explain how their work contrasts with that of the Peloponnesian masters.

4. Show the importance of the Church on the Plan of St. Gall as exhibiting a transition from the early Christian to the mediæval type.

5. Summarise the justification given by Theophilus for the practice of the arts as a part of the religious life. How far did the monastery offer a favourable field for this practice?

6. Explain the function in Gothic Architecture of the flying buttress, with the pier and pinnacle connected therewith.

7. Give a clear account of the technical process *either* of cloisonné enamel work, *or* of stained-glass window making as described by Theophilus.

8. What part does the personification of Death play in Italian and northern art? Refer to examples.

9. Criticise the style in relief sculpture of Nicola Pisano and of Ghiberti. From what source in each case does the style seem to be derived?

10. Explain the scheme according to which Michelangelo distributed his various subjects and figures on the vault of the Sistine Chapel.

11. Explain briefly the technical differences between the three kinds of painting in tempera, fresco, and oil, and sketch the history of oil painting in Flanders and Italy during the 15th century.

12. How would you describe "Impressionism" in painting? To what extent can it be justified by the facts of human vision?

13. Explain the terms *niello, arcosolium, repoussé, intersecting vault, Bible historié, rococo, serdab, ka.*

Examination Papers for Degree of M.A. with Honours.

(A)—CLASSICS.

LATIN.

MONDAY, *3rd April* 1899.—9 *to* 12 *o'clock.*

Translate:—

1. *Euclio.* Fide censebam maxumam multo fidem
esse: ea sublevit os mihi paenissume.
ni subvenisset corvos, periissem miser.
nimis hercle ego illum corvom ad me veniat velim,
qui indicium fecit, ut ego illic aliquid boni
dicam: nam quod edit tam duim quam perduim.
nunc hoc ubi abstrudam cogito solum locum.
Silvani lucus extra murum est avius,
crebro salicto oppletus: ibi sumam locum.
certumst Silvano potius credam quam Fide.

2. Extremum illud est, quod tu nescio an primum putes: plures iam pavones confeci quam tu pullos columbinos. tu istic te Hateriano iure delectas, ego me hic Hirtiano. veni igitur,

si vir es, et disce a me προλεγομένας, quas quaeris: etsi sus Minervam. sed quo modo, videro. si aestimationes tuas vendere non potes neque ollam denariorum implere, Romam tibi remigrandum est. satius est hic cruditate quam istic fame. video te bona perdidisse: spero idem istuc familiares tuos. actum igitur de te est, nisi provides. potes mulo isto, quem tibi reliquum dicis esse, quoniam cantherium comedisti, Romam pervehi. sella tibi erit in ludo tamquam hypodidascalo proxima! eam pulvinus sequetur.

3. Talibus amplifice vestis decorata figuris
pulvinar complexa suo velabat amictu.
quae postquam cupide spectando Thessala pubes
expleta est, sanctis coepit decedere divis.
hic, qualis flatu placidum mare matutino
horrificans Zephyrus proclivas incitat undas
aurora exoriente vagi sub limina Solis,
quae tarde primum clementi flamine pulsae
procedunt leviterque sonant plangore cachinni,
post vento crescente magis magis increbrescunt
purpureaque procul nantes a luce refulgent,
sic tum ibi vestibuli linquentes regia tecta
ad se quisque vago passim pede discedebant.

4. Quaeris, cur veniam tibi tardior. aurea Phoebi
porticus a magno Caesare aperta fuit.
tota erat in speciem Poenis digesta columnis,
inter quas Danai femina turba senis.
tum medium claro surgebat marmore templum
et patria Phoebo carius Ortygia.
et duo Solis erant supra fastigia currus
et valvae, Libyci nobile dentis opus.
altera deiectos Parnasi vertice Gallos,
altera maerebat funera Tantalidos.
deinde inter matrem deus ipse interque sororem

Pythius in longa carmina veste sonat.
hic equidem Phoebo visus mihi pulchrior ipso
marmoreus tacita carmen hiare lyra:
atque aram circum steterant armenta Myronis,
quattuor artifices, vivida signa, boves.

5. Non ita Romuli
praescriptum et intonsi Catonis
auspiciis veterumque norma.

privatus illis census erat brevis,
commune magnum: nulla decempedis
metata privatis opacam
porticus excipiebat Arcton,

nec fortuitum spernere caespitem
leges sinebant, oppida publico
sumptu iubentes et deorum
templa novo decorare saxo.

6. Carmina conpono, hic elegos. mirabile visu
caelatumque novem Musis opus! adspice primum,
quanto cum fastu, quanto molimine circum
spectemus vacuam Romanis vatibus aedem;
mox etiam, si forte vacas, sequere et procul audi,
quid ferat et quare sibi nectat uterque coronam.
caedimur et totidem plagis consumimus hostem
lento Samnites ad lumina prima duello.
discedo Alcaeus puncto illius; ille meo quis?
quis nisi Callimachus? si plus adposcere visus,
fit Mimnermus et optivo cognomine crescit.

7. Octobres age sentiat Kalendas
facundi pia Roma Restituti.
linguis omnibus et favete votis;
natalem colimus, tacete lites.
absit cereus aridi clientis,

et vani triplices brevesque mappae
expectent gelidi iocos Decembris.
certent muneribus beatiores.
Agrippae tumidus negotiator
Cadmi municipes ferat lacernas;
pugnorum reus ebriaeque noctis
cenatoria mittat advocato;
infamata virum puella vicit?
veros sardonychas, sed ipsa tradat;
mirator veterum senex avorum
donet Phidiaci toreuma caeli,
venator leporem, colonus haedum,
piscator ferat aequorum rapinas.
si mittit sua quisque, quid poetam
missurum tibi, Restitute, credis?

8. Hoc autem his accidit, qui non introspectis penitus virtutibus ad primum se velut aspectum orationis aptarunt; et cum iis felicissime cessit imitatio, verbis atque numeris sunt non multum differentes, vim dicendi atque inventionis non assequuntur, sed plerumque declinant in peius et proxima virtutibus vitia comprehendunt fiuntque pro grandibus tumidi, pressis exiles, fortibus temerarii, laetis corrupti, compositis exultantes, simplicibus negligentes. ideoque qui horride atque incomposite quamlibet illud frigidum et inane extulerunt, antiquis se pares credunt; qui carent cultu atque sententiis, Attici sunt scilicet; qui praecisis conclusionibus obscuri, Sallustium atque Thucydidem superant; tristes ac ieiuni Pollionem aemulantur; otiosi et supini, si quid modo longius circumduxerunt, iurant ita Ciceronem locuturum fuisse.

9. Tripertito agmine pars, ut adstiterat, Flaminia via, pars iuxta ripam Tiberis incessit; tertium agmen per Salariam Collinae portae propinquabat. plebs invectis equitibus fusa; miles Vitellianus trinis et ipse praesidiis occurrit. proelia ante

urbem multa et varia, sed Flavianis consilio ducum praestantibus saepius prospera. ii tantum conflictati sunt, qui in partem sinistram urbis ad Sallustianos hortos per angusta et lubrica viarum flexerant: superstantes maceriis hortorum Vitelliani ad serum usque diem saxis pilisque subeuntes arcebant, donec ab equitibus, qui porta Collina inruperant, circumvenirentur. concurrere et in campo Martio infestae acies.

TUESDAY, 4*th April* 1899.—2 *to* 5 *o'clock.*

1. Translate, with critical or explanatory notes:—

(1) ut civitas nomen mihi commutet meque ut praedicet
lenone ex Ballione regem Iasonem.

(2) illi *drahcmis sent* miseri: me nemo potest
minoris quisquam nummo ut surgam subigere.
drahcmis sent, B. *Emend.*

(3) perii: annorum lex me perdit quinavicenaria.

(4) Pseudolus mihi centuriata habuit capitis comitia.

(5) gaudete vos *quoque lidiae* lacus undae,
ridete quidquid est domi cachinnorum.
Emend the first line.

(6) verum utrum illius an mei, quid ad me?
utor tam bene quam mihi pararim.

(7) municipia vero deum, nec simulant, ut cum de illo aegroto vota faciebant.

(8) Sulla potuit, ego non potero?

(9) eundum in Hispaniam censui; quod si fecisset, civile bellum nullum omnino fuisset.

(10) volui *N S Q egi* per praedem ille *daret Antii* cum haberet venale: noluit.
Emend and translate.

(11) renuit negitatque Sabellus.

Quote and discuss any other passages in Horace bearing upon the meaning and application of the word "Sabellus."

(12) ne sis patruus mihi.

How far does the ordinary rule as to the expression of prohibitions require modifying?

(13) rancidum aprum antiqui laudabant *haud quia* nasus illis nullus *erat.*

Write a grammatical note on this.

(14) sedilibusque magnus in primis eques
Othone contempto sedet.

(15) si quid tamen olim
scripseris, in Maeci descendat iudicis aures
et patris et nostras nonumque prematur in annum.

(16) vel tu quae tardam movisti fune Cybeben,
Claudia, turritae rara ministra deae.

(17) fluminaque Haemonio comminus isse viro
Idaeum Simoenta Iovis *cunabula parvi.*

Desunt in codice Neapolitano verba 'cunabula parvi.

(18) tanto cum adsensu senatus auditus est Montanus, ut spem caperet Helvidius posse etiam Marcellum prosterni.

(19) praecipua miseriarum pars erat videre et aspici, cum suspiria nostra subscriberentur, cum denotandis tot hominum palloribus sufficeret saevus ille vultus et rubor, quo se contra pudorem muniebat.

(20) ad dominum redeas, noster te non capit ignis,
conturbator aper: vilius esurio.

(21) foroque triplici sparsus ante equos omnes
Aedemque Martis et colosson Augusti
curris per omnes tertiasque quintasque.

2. Scan the following lines, calling attention to any peculiarities of prosody or metre:—

(*a*) si non periret immiserabilis.

(*b*) laurea donandus Apollinari.

(*c*) nullam, Vare, sacra vite prius severis arborem.

(*d*) quin tibi ultro supplicatum venio ob stultitiam meam.

(*e*) mutuis animis amant amantur.

(*f*) abit in quiete molli rabidus furor animi.

(*g*) ut supplicis vocem in novissimo casu.

II.

[*Two questions at least should be attempted in each group, and not more than six in all.*]

Literature.

1. State shortly how much in Plautus' plays comes from (*a*) the New Comedy of Athens, (*b*) other Greek sources, (*c*) Roman or Italian sources.

2. What do you know of the following MSS. and their dates? The Ambrosian Palimpsest of Plautus, the Codex Vetus (B) of Plautus, the Medicean of Virgil, the Blandinian of Horace, the Sangermanensis and Oxoniensis of Catullus.

3. Compare or contrast Horace with Propertius in regard to their character and temperament, the circumstances of their lives, and their literary views.

4. Trace the influence of Catullus on later Roman poetry. How is he regarded by Horace and Martial?

5. What changes does the style of Tacitus undergo, in his extant works, and how do you account for them?

6. (*a*) tragoediae scriptores veterum Attius atque Pacuvius clarissimi gravitate sententiarum, verborum pondere, auctoritate personarum.

(*b*) sunt clari hodieque et qui olim nominabuntur. alterum illud etiam prius saturae genus, sed non sola carminum varietate mixtum, condidit Terentius Varro.

(*c*) nam mihi videtur M. Tullius effinxisse vim Demosthenis, copiam Platonis, iucunditatem Isocratis.

Translate, and explain or discuss briefly.

7. Trace the influence of Stoicism upon Roman thought and literature.

HISTORY.

1. What was the extent of the *civitas*, and the position of Rome in Italy, at the beginning of the First Punic War?

Indicate shortly the causes which led to the control of affairs by the Senate in the period of war and conquest which followed.

2. Describe the position of Cicero, and the part which he played in public life, in the years 70, 64, 58, and 45 B.C.

3. Give some account of the formation of the First Triumvirate in 60 B.C., of the circumstances under which it was renewed in 56, and of the causes which brought about its dissolution.

4. Define accurately the constitutional change which took place on the establishment of the Empire by Augustus.

5. "Vi dominationis convulsus ac mutatus."

Explain the application of this phrase to Tiberius, and consider whether it would also apply to Domitian. What were the chief causes which embittered or demoralised the later Emperor?

6. Enumerate the chief officials who served under the Emperor, and indicate shortly their duties and their importance.

WEDNESDAY, *5th April* 1899.—9 *to* 12 *o'clock.*

For Latin Prose:—

Next to the impression of the vast fertility, compass and beauty of our English poetry, the reflection that recurs most frequently and forcibly to us in accompanying Mr. Campbell through his wide survey, is the perishable nature of poetical fame, and the speedy oblivion that has overtaken so many of the promised heirs of immortality. Of near two hundred and fifty authors, whose works are cited in these volumes, by far the greater part of whom were celebrated in their generation, there are not thirty who now enjoy anything that can be called

popularity—whose works are to be found in the hands of ordinary readers, in the shops of ordinary booksellers, or in the press for republication. About fifty more may be tolerably familiar to men of taste or literature; the rest slumber on the shelves of collectors, and are partially known to a few antiquaries and scholars. Now, the fame of a poet is popular, or nothing. He does not address himself, like the man of science, to the learned, or those who desire to learn, but to all mankind; and his purpose being to delight and to be praised, necessarily extends to all who can receive pleasure, or join in applause. It is strange, and somewhat humiliating, to see how great a proportion of those who had once fought their way successfully to distinction, and surmounted the rivalry of contemporary envy, have again sunk into neglect. We have great deference for public opinion; and readily admit that nothing but what is good can be permanently popular. But though its *virat* be generally oracular, its *pereat* appears to us to be often sufficiently capricious; and while we would foster all that it bids to live, we would willingly revive much that it leaves to die.

JEFFREY.

THURSDAY, 6*th April* 1899.—2 *to* 5 *o'clock.*

Translate:—

1. Non igitur de improbo, sed de callido improbo quaerimus, qualis Q. Pompeius in foedere Numantino infitiando fuit, nec vero omnia timente, sed primum qui animi conscientiam non curet, quam scilicet comprimere nihil est negotii. is enim, qui occultus et tectus dicitur, tantum abest ut se indicet, perficiet etiam ut dolere alterius improbo facto videatur: quid est enim aliud esse versutum? memini me adesse P. Sextilio Rufo, quum is rem ad amicos ita deferret, se esse heredem Q. Fadio Gallo, cuius in testamento scriptum esset se ab eo roga-

tum, ut omnis hereditas ad filiam perveniret. id Sextilius factum negabat. poterat autem impune: quis enim redargueret? nemo nostrum credebat, eratque veri similius hunc mentiri, cuius interesset, quam illum, qui id se rogasse scripsisset, quod debuisset rogare. addebat etiam se in legem Voconiam iuratum contra eam facere non audere, nisi aliter amicis videretur. aderamus nos quidem adulescentes, sed multi amplissimi viri, quorum nemo censuit plus Fadiae dandum quam posset ad eam lege Voconia pervenire. tenuit permagnam Sextilius hereditatem, unde, si secutus esset eorum sententiam, qui honesta et recta emolumentis omnibus et commodis anteponerent, nummum nullum attigisset. num igitur eum postea censes anxio animo aut sollicito fuisse? nihil minus contraque illa hereditate dives ob eamque rem laetus. magni enim aestimabat pecuniam non modo non contra leges, sed etiam legibus partam, quae quidem vel cum periculo est quaerenda vobis. est enim effectrix multarum et magnarum voluptatum. ut igitur illis, qui, recta et honesta quae sunt, ea statuunt per se expetenda, adeunda sunt quaevis pericula decoris honestatisque causa, sic vestris, qui omnia voluptate metiuntur, pericula adeunda sunt, ut adipiscantur magnas voluptates.

2. At non Evandrum potis est vis ulla tenere,
sed venit in medios. feretro Pallanta reposto
procubuit super atque haeret lacrimansque gemensque;
et via vix tandem voci laxata dolore est:
"non haec, o Palla! dederas promissa parenti,
cautius ut saevo velles te credere Marti.
haud ignarus eram, quantum nova gloria in armis
et praedulce decus primo certamine posset.
primitiae iuvenis miserae! bellique propinqui
dura rudimenta! et nulli exaudita deorum
vota precesque meae! tuque, o sanctissima conjunx
felix morte tua, neque in hunc servata dolorem!

contra ego vivendo vici mea fata, superstes
restarem ut genitor. Troum socia arma secutum
obruerent Rutuli telis! animam ipse dedissem,
atque haec pompa domum me, non Pallanta, referret!
nec vos arguerim, Teucri, nec foedera nec quas
iunximus hospitio dextras: sors ista senectae
debita erat nostrae. quod si immatura manebat
mors natum, caesis Volscorum millibus ante
ducentem in Latium Teucros cecidisse iuvabit."

3. Carissimum virum amiserat, avunculum nostrum, cui virgo nupserat, in ipsa quidem navigatione: tulit tamen eodem tempore et luctum et metum evictisque tempestatibus corpus eius naufraga evexit. o quam multarum egregia opera in obscuro iacent! si huic illa simplex admirandis virtutibus contigisset antiquitas, quanto ingeniorum certamine celebraretur uxor, quae, oblita inbecillitatis, oblita metuendi etiam firmissimis maris, caput suum periculis pro sepultura obiecit et, dum cogitat de viri funere, nihil de suo timuit! nobilitatur carminibus omnium, quae se pro coniuge vicariam dedit: hoc amplius est, discrimine vitae sepulcrum viro quaerere. maior est amor, qui pari periculo minus redimit. post hoc nemo miratur, quod per sedecim annos, quibus Aegyptum maritus eius obtinuit, numquam in publico conspecta est, neminem provincialem domum suam admisit, nihil a viro petiit, nihil a se peti passa est. itaque loquax et in contumelias praefectorum ingeniosa provincia, in qua etiam qui vitaverunt culpam, non effugerunt infamiam, velut unicum sanctitatis exemplum suspexit et, quod illi difficillimum est, cui etiam periculosi sales placent, omnem verborum licentiam continuit et hodie similem illi, quamvis numquam speret, semper optat. multum erat, si per sedecim annos illam provincia probasset: plus est, quod ignoravit.

4. Haec placet, haec timidae tellus tutissima matri.

qualis vicino volucris jam sedula partu
iamque timens, qua fronde domum suspendat inanem,
providet hinc ventos, hinc anxia cogitat angues,
hinc homines: tandem dubiae placet umbra, novisque
vix stetit in ramis et protinus arbor amatur.
altera consilio superest tristemque fatigat
cura deam, natum ipsa sinu complexa per undas
an magno Tritone ferat, ventosne volucres
advocet an pelago solitam Thaumantida pasci.
elicit inde fretis et murice frenat acuto
delphinas biiuges, quos illi maxima Tethys
gurgite Atlanteo pelagi sub valle sonora
nutrierat: nullis vada per Neptunia glaucae
tantus honor formae nandique potentia nec plus
pectoris humani: jubet hos subsistere pleno
litore, ne nudae noceant contagia terrae.
ipsa dehinc toto resolutum pectore Achillem
(qui pueris sopor) Haemonii de rupibus antri
ad placidas deportat aquas et jussa tacere
litora: monstrat iter, totoque effulserat orbe
Cynthia: prosequitur divam celeresque recursus
securus pelagi Chiron rogat udaque celat
lumina et abreptos subito jam jamque latentes
erecto prospectat equo, qua cana parumper
spumant signa fugae et liquido perit orbita ponto.

GREEK—Prescribed Books.

Monday, 3*rd April* 1899.—2 *to* 5 *o'clock.*

Translate:—

1. ἀλλ', Ἀχιλεῦ, δάμασον θυμὸν μέγαν· οὐδέ τί σε χρὴ
νηλεὲς ἦτορ ἔχειν· στρεπτοὶ δέ τε καὶ θεοὶ αὐτοί,
τῶν περ καὶ μείζων ἀρετὴ τιμή τε βίη τε.

καὶ μὲν τοὺς θνέεσσι καὶ εὐχωλῇς ἀγανῇσι,
λοιβῇ τε κνίσῃ τε παρατρωπῶσ' ἄνθρωποι
λισσόμενοι, ὅτε κέν τις ὑπερβήῃ καὶ ἁμάρτῃ.
καὶ γάρ τε Λιταί εἰσι Διὸς κοῦραι μεγάλοιο,
χωλαί τε ῥυσαί τε παραβλῶπές τ' ὀφθαλμώ,
αἵ ῥά τε καὶ μετόπισθ' Ἄτης ἀλέγουσι κιοῦσαι.
ἡ δ' Ἄτη σθεναρή τε καὶ ἀρτίπος, οὕνεκα πάσας
πολλὸν ὑπεκπροθέει, φθάνει δέ τε πᾶσαν ἐπ' αἶαν
βλάπτουσ' ἀνθρώπους· αἱ δ' ἐξακέονται ὀπίσσω.
ὃς μέν τ' αἰδέσεται κούρας Διὸς ἄσσον ἰούσας,
τόνδε μέγ' ὤνησαν καί τ' ἔκλυον εὐξαμένοιο·
ὃς δέ κ' ἀνήνηται καί τε στερεῶς ἀποείπῃ,
λίσσονται δ' ἄρα ταί γε Δία Κρονίωνα κιοῦσαι
τῷ Ἄτην ἅμ' ἕπεσθαι, ἵνα βλαφθεὶς ἀποτίσῃ.

2. ἵστε μὰν Αἴαντος ἀλκὰν φοίνιον, τὰν ὀψία
ἐν νυκτὶ ταμὼν περὶ ᾧ φασγάνῳ μομφὰν ἔχει παίδεσσιν
Ἑλλάνων, ὅσοι Τρῴανδ' ἔβαν.
ἀλλ' Ὅμηρός τοι τετίμακεν δι' ἀνθρώπων, ὃς αὐτοῦ
πᾶσαν ὀρθώσαις ἀρετὰν κατὰ ῥάβδον ἔφρασεν
θεσπεσίων ἐπέων λοιποῖς ἀθύρειν.
τοῦτο γὰρ ἀθάνατον φωνᾶεν ἕρπει,
εἴ τις εὖ εἴπῃ τι, καὶ πάγκαρπον ἐπὶ χθόνα καὶ διὰ πόντον
βέβακεν
ἐργμάτων ἀκτὶς καλῶν ἄσβεστος αἰεί.
προφρόνων Μοισᾶν τύχοιμεν, κεῖνον ἄψαι πυρσὸν ὕμνων
καὶ Μελίσσῳ, παγκρατίου στεφάνωμ' ἐπάξιον,
ἔρνεϊ Τελεσιάδα. τόλμᾳ γὰρ εἰκὼς
θυμὸν ἐριβρεμετᾶν θηρᾷ λεόντων
ἐν πόνῳ, μῆτιν δ' ἀλώπηξ, αἰετοῦ ἄτ' ἀναπιτναμένα ῥόμβον
ἴσχει.
χρὴ δὲ πᾶν ἔρδοντα μαυρῶσαι τὸν ἐχθρόν.

3. ἐγὼ δὲ χώρᾳ τῇδε καὶ τῷ σῷ στρατῷ
τὸ λοιπὸν εἰς ἅπαντα πλειστήρη χρόνον

ὁρκωμοτήσας νῦν ἄπειμι πρὸς δόμους,
μήτοι τιν' ἄνδρα δεῦρο πρυμνήτην χθονὸς
ἐλθόντ' ἐποίσειν εὖ κεκασμένον δόρυ.
αὐτοὶ γὰρ ἡμεῖς ὄντες ἐν τάφοις τότε
τοῖς τἀμὰ παρβαίνουσι νῦν ὁρκώματα
ἀμηχάνοισι πράξομεν δυσπραξίαις,
ὁδοὺς ἀθύμους καὶ παρόρνιθας πόρους
τιθέντες, ὡς αὐτοῖσι μεταμέλῃ πόνος·
ὀρθουμένων δέ, καὶ πόλιν τὴν Παλλάδος
τιμῶσιν ἀεὶ τήνδε συμμάχῳ δορί,
αὐτοῖσιν ἡμεῖς ἐσμεν εὐμενέστεροι.
καὶ χαῖρε, καὶ σὺ καὶ πολισσοῦχος λεώς·
πάλαισμ' ἄφυκτον τοῖς ἐναντίοις ἔχοις,
σωτήριόν τε καὶ δορὸς νικηφόρον.

4. καὶ μὴν ὁ χρησμὸς οὐκέτ' ἐκ καλυμμάτων
ἔσται δεδορκὼς νεογάμου νύμφης δίκην·
λαμπρὸς δ' ἔοικεν ἡλίου πρὸς ἀντολὰς
πνέων ἐσήξειν, ὥστε κύματος δίκην
κλύζειν πρὸς αὐγὰς τοῦδε πήματος πολὺ
μεῖζον· φρενώσω δ' οὐκέτ' ἐξ αἰνιγμάτων.
καὶ μαρτυρεῖτε συνδρόμως ἴχνος κακῶν
ῥινηλατούσῃ τῶν πάλαι πεπραγμένων.
τὴν γὰρ στέγην τήνδ' οὔποτ' ἐκλείπει χορὸς
σύμφθογγος, οὐκ εὔφωνος· οὐ γὰρ εὖ λέγει.

5. δεῖν δ' ᾤετο μηδένα ἀποστερεῖσθαι τοῦ δίκης τυχεῖν, ὡς ἕκαστος δύναται, πῶς οὖν ἔστιν τοῦτο; ἐὰν πολλὰς ὁδοὺς δῷ διὰ τῶν νόμων ἐπὶ τοὺς ἠδικηκότας, οἷον τῆς κλοπῆς. ἔρρωσαι καὶ σαυτῷ πιστεύεις· ἄπαγε· ἐν χιλίαις δ' ὁ κίνδυνος. ἀσθενέστερος εἶ τοῖς ἄρχουσιν ἐφηγοῦ· τοῦτο ποιήσουσιν ἐκεῖνοι. φοβεῖ καὶ τοῦτο· γράφου. καταμέμφει σεαυτὸν καὶ πένης ὢν οὐκ ἂν ἔχοις χιλίας ἐκτῖσαι· δικάζου κλοπῆς πρὸς διαιτητὴν καὶ οὐ κινδυνεύσεις. τούτων οὐδέν ἐστι τὸ αὐτό. τῆς ἀσεβείας κατὰ ταὐτὰ ἔστιν ἀπάγειν, γράφεσθαι, δικάζεσθαι πρὸς Εὐμολπίδας, φαίνειν πρὸς τὸν βασιλέα.

περὶ τῶν ἄλλων ἁπάντων τὸν αὐτὸν τρόπον σχεδόν. εἰ δή τις ὡς μὲν οὐχὶ κακοῦργός ἐστι μὴ λέγοι, ἢ ὡς οὐκ ἀσεβής, ἢ ὅ τι δήποτ' εἴη δι' ὃ κρίνοιτο, διὰ ταῦτα δ' ἐκφεύγειν ἀξιοίη, εἰ μὲν ἀπηγμένος εἴη, διότι πρὸς διαιτητὴν ἐξῆν αὐτῷ λαχεῖν καὶ γράφεσθαι χρῆν, εἰ δὲ πρὸς διαιτητῇ φεύγοι, ὅτι χρῆν σε ἀπάγειν, ἵν' ἐκινδύνευες περὶ χιλιῶν, γέλως ἂν εἴη δήπουθεν.

6. πρῶτον μὲν εἰ πρὸς αὐτὴν τὴν τέχνην ἀδύνατα πεποίηται, ἡμάρτηται, ἀλλ' ὀρθῶς ἔχει, εἰ τυγχάνει τοῦ τέλους τοῦ αὐτῆς (τὸ γὰρ τέλος εἴρηται), εἰ οὕτως ἐκπληκτικώτερον ἢ αὐτὸ ἢ ἄλλο ποιεῖ μέρος. παράδειγμα ἡ τοῦ Ἕκτορος δίωξις. εἰ μέντοι τὸ τέλος ἦ μᾶλλον ἢ <μὴ> ἧττον ἐνεδέχετο ὑπάρχειν καὶ κατὰ τὴν περὶ τούτων τέχνην, [ἡμαρτῆσθαι] οὐκ ὀρθῶς· δεῖ γὰρ εἰ ἐνδέχεται ὅλως μηδαμῇ ἡμαρτῆσθαι. ἔτι ποτέρων ἐστὶ τὸ ἁμάρτημα, τῶν κατὰ τὴν τέχνην ἢ κατ' ἄλλο συμβεβηκός; ἔλαττον γὰρ εἰ μὴ ᾔδει ὅτι ἔλαφος θήλεια κέρατα οὐκ ἔχει ἢ εἰ ἀμιμήτως ἔγραψεν. πρὸς δὲ τούτοις ἐὰν ἐπιτιμᾶται ὅτι οὐκ ἀληθῆ, ἀλλ' ἴσως <ὡς> δεῖ—οἷον καὶ Σοφοκλῆς ἔφη αὐτὸς μὲν οἵους δεῖ ποιεῖν, Εὐριπίδην δὲ οἷοι εἰσίν—ταύτῃ λυτέον. εἰ δὲ μηδετέρως, ὅτι οὕτω φασίν· οἷον τὰ περὶ θεῶν· ἴσως γὰρ οὔτε βέλτιον οὕτω λέγειν οὔτ' ἀληθῆ, ἀλλ' <εἰ> ἔτυχεν ὥσπερ Ξενοφάνει· ἀλλ' οὖν φασι. τὰ δὲ ἴσως οὐ βέλτιον μέν, ἀλλ' οὕτως εἶχεν, οἷον τὰ περὶ τῶν ὅπλων, "ἔγχεα δέ σφιν Ὄρθ' ἐπὶ σαυρωτῆρος."

πρὸς δὲ τούτοις ἐὰν ἐπιτιμᾶται κ.τ.λ. Explain and briefly develope the line of thought pursued in the remainder of the passage.

TUESDAY, *4th April* 1899.—9 *to* 12 *o'clock.*

Translate :—

1. ΔΗ. ἐγὼ γὰρ ὢν ὁ θήρ με Κένταυρος ποτὲ
πλευρὰν πικρᾷ γλωχῖνι προὐδιδάξατο,
παρῆκα θεσμῶν οὐδὲν ἀλλ' ἐσῳζόμην,
χαλκῆς ὅπως δύσνιπτον ἐκ δέλτου γραφήν.

καί μοι τάδ' ἦν πρόρρητα, καὶ τοιαῦτ' ἔδρων·
τὸ φάρμακον τοῦτ' ἄπυρον ἀκτῖνός τ' ἀεὶ
θερμῆς ἄθικτον ἐν μυχοῖς σῴζειν ἐμέ,
ἕως νιν ἀρτίχριστον ἁρμόσαιμί που.
κἄδρων τοιαῦτα. νῦν δ', ὅτ' ἦν ἐργαστέον,
ἔχρισα μὲν κατ' οἶκον ἐν δόμοις κρυφῇ
μαλλῷ, σπάσασα κτησίου βοτοῦ λάχνην,
κἄθηκα συμπτύξασ' ἀλαμπὲς ἡλίου
κοίλῳ ζυγάστρῳ δῶρον, ὥσπερ εἶδετε.
εἶσω δ' ἀποστείχουσα δέρκομαι φάτιν
ἄφραστον, ἀξύμβλητον ἀνθρώπῳ μαθεῖν.
τὸ γὰρ κάταγμα τυγχάνω ῥίψασά πως
τῆς οἰός, ᾗ προὔχριαν, ἐς μέσην φλόγα,
ἀκτῖν' ἐς ἡλιῶτιν· ὡς δ' ἐθάλπετο,
ῥεῖ πᾶν ἄδηλον καὶ κατέψηκται χθονί,
μορφῇ μάλιστ' εἰκαστὸν ὥστε πρίονος
ἐκβρώματ' ἂν βλέψειας ἐν τομῇ ξύλου.
τοιόνδε κεῖται προπετές. ἐκ δὲ γῆς, ὅθεν
προὔκειτ', ἀναζέουσι θρομβώδεις ἀφροί,
γλαυκῆς ὀπώρας ὥστε πίονος ποτοῦ
χυθέντος ἐς γῆν βακχίας ἀπ' ἀμπέλου.

SOPH. *Trachin.*, 680-704.

Line 8, ἕως ἄν, MSS. : ἕως νιν, Elmsley. Write a note on the reading.

2.

θεὰ δ' ἐλέησεν ἑταίραν
καί νιν Ἀθαναία πρὸς τόδ' ἔλεξεν ἔπος
'διὰ γύναι μετὰ πάντα βαλεῦ πάλιν ὅσσα δι' ὀργάν
εἶπας· ἐγὼ δ' οὔ τοι τέκνον ἔθηκ' ἀλαόν.
οὐ γὰρ Ἀθαναίαι γλυκερὸν πέλει ὄμματα παίδων
ἁρπάζειν· Κρόνιοι δ' ὧδε λέγοντι νόμοι·
ὅς κε τιν' ἀθανάτων, ὅκα μὴ θεὸς αὐτὸς ἕληται,
ἀθρήσηι, μισθῶ τοῦτον ἰδεῖν μεγάλω.
διὰ γύναι, τὸ μὲν οὐ παλινάγρετον αὖθι γένοιτο

ἔργον· ἐπεὶ μοιρᾶν ὧδ' ἐπένησε λίνα,
ἀνίκα τὸ πρᾶτόν νιν ἐγείναο· νῦν δὲ κομίζευ,
ὦ Εὐηρείδα, τέλθος ὀφειλόμενον.
πόσσα μὲν ἁ Καδμηὶς ἐς ὕστερον ἔμπυρα καυσεῖ,
πόσσα δ' Ἀρισταῖος, τὸν μόνον εὐχόμενοι
παῖδα, τὸν ἁβατὰν Ἀκταίονα, τυφλὸν ἰδέσθαι.
καὶ τᾶνος μεγάλας σύνδρομος Ἀρτέμιδος
ἐσσεῖτ'· ἀλλ' οὐκ αὐτὸν ὅ τε δρόμος αἵ τ' ἐν ὄρεσσι
ῥυσεῦνται ξυναὶ τᾶμος ἑκαβολίαι,
ὀππόκα κοὐκ ἐθέλων περ ἴδῃ χαρίεντα λοετρά
δαίμονος· ἀλλ' αὐταὶ τὸν πρὶν ἄνακτα κύνες
τουτάκι δειπνησεῦντι· τὰ δ' υἱέος ὀστέα μάτηρ
λεξεῖται δρυμὼς πάντας ἐπερχομένα·
ὀλβίσταν ἐρέει σε καὶ εὐαίωνα γενέσθαι,
ἐξ ὀρέων ἁλαὸν παῖδ' ἀποδεξαμέναν.
ὦ ἑτάρα, τῶι μή τι μινύρεο· τῶιδε γὰρ ἄλλα
τεῦ χάριν ἐξ ἐμέθεν πολλὰ μενεῦντι γέρα.
μάντιν ἐπεὶ θησῶ νιν ἀοίδιμον ἐσσομένοισιν,
ἢ μέγα τῶν ἄλλων δή τι περισσότερον,
γνωσεῖται δ' ὄρνιχας, ὃς αἴσιος οἵ τε πέτονται
ἤλιθα καὶ ποίων οὐκ ἀγαθαὶ πτέρυγες.
πολλὰ δὲ Βοιωτοῖσι θεοπρόπα, πολλὰ δὲ Κάδμωι
χρησεῖ, καὶ μεγάλοις ὕστερα Λαβδακίδαις.

CALLIM., *Hymn V.* (*Pallad. Lavacr.*), 95-126.

3. Ὅτι μὲν καλὰ τὰ προειργασμένα καὶ ὑπὲρ καλῶν τῶν μελλόντων ὁ ἀγὼν ἔσται, ὦ Συρακόσιοι καὶ ξύμμαχοι, οἵ τε πολλοὶ δοκεῖτε ἡμῖν εἰδέναι (οὐδὲ γὰρ ἂν αὐτῶν οὕτως προθύμως ἀντελάβεσθε), καὶ εἴ τις μὴ ἐπὶ ὅσον δεῖ ἦσθηται, σημανοῦμεν. Ἀθηναίους γὰρ ἐς τὴν χώραν τήνδε ἐλθόντας πρῶτον μὲν ἐπὶ τῆς Σικελίας καταδουλώσει, ἔπειτα δέ, εἰ κατορθώσειαν, καὶ τῆς Πελοποννήσου καὶ τῆς ἄλλης Ἑλλάδος, καὶ ἀρχὴν τὴν ἤδη μεγίστην τῶν τε πρὶν Ἑλλήνων καὶ τῶν νῦν κεκτημένους, πρῶτοι ἀνθρώπων ὑποστάντες τῷ ναυτικῷ, ᾧπερ πάντα κατέσχον, τὰς μὲν νενικήκατε ἤδη ναυμα-

χίας, τὴν δ' ἐκ τοῦ εἰκότος νῦν νικήσετε. ἄνδρες γὰρ ἐπειδὰν ᾧ ἀξιοῦσι προὔχειν κολουθῶσι, τό γ' ὑπόλοιπον αὐτῶν τῆς δόξης ἀσθενέστερον αὐτὸ ἑαυτοῦ ἐστιν ἢ εἰ μηδ' ᾠήθησαν τὸ πρῶτον, καὶ τῷ παρ' ἐλπίδα τοῦ αὐχήματος σφαλλόμενοι καὶ παρὰ ἰσχὺν τῆς δυνάμεως ἐνδιδόασιν· ὃ νῦν Ἀθηναίους εἰκὸς πεπονθέναι.

ἡμῶν δὲ τό τε ὑπάρχον πρότερον, ᾧπερ καὶ ἀνεπιστήμονες ἔτι ὄντες ἀπετολμήσαμεν, βεβαιότερον νῦν, καὶ τῆς δοκήσεως προσγεγενημένης αὐτῷ, τὸ κρατίστους εἶναι, εἰ τοὺς κρατίστους ἐνικήσαμεν, διπλασία ἑκάστου ἡ ἐλπίς· τὰ δὲ πολλὰ πρὸς τὰς ἐπιχειρήσεις ἡ μεγίστη ἐλπὶς μεγίστην καὶ τὴν προθυμίαν παρέχεται. τά τε τῆς ἀντιμιμήσεως αὐτῶν τῆς παρασκευῆς ἡμῶν τῷ μὲν ἡμετέρῳ τρόπῳ ξυνήθη τέ ἐστι καὶ οὐκ ἀνάρμοστοι πρὸς ἕκαστον αὐτῶν ἐσόμεθα· οἱ δ', ἐπειδὰν πολλοὶ μὲν ὁπλῖται ἐπὶ τῶν καταστρωμάτων παρὰ τὸ καθεστηκὸς ὦσι, πολλοὶ δὲ καὶ ἀκοντισταί, χερσαῖοι ὡς εἰπεῖν Ἀκαρνᾶνές τε καὶ ἄλλοι ἐπὶ ναῦς ἀναβάντες, οἳ οὐδ' ὅπως καθεζομένους χρὴ τὸ βέλος ἀφεῖναι εὑρήσουσι, πῶς οὐ σφαλοῦσί τε τὰς ναῦς καὶ ἐν σφίσιν αὐτοῖς πάντες, οὐκ ἐν τῷ αὐτῶν τρόπῳ κινούμενοι, ταράξονται;

Thucyd., vii. 66-67, § 2.

4. Πολλῶν δὲ ὄντων καὶ καλῶν ἐν τῷ τῶν ἀνθρώπων βίῳ, τοῖς πλείστοις αὐτῶν οἷον κῆρες ἐπιπεφύκασιν, αἳ καταμιαίνουσί τε καὶ καταρρυπαίνουσιν αὐτά· καὶ δὴ καὶ δίκη ἐν ἀνθρώποις πῶς οὐ καλόν, ὃ πάντα ἡμέρωκε τὰ ἀνθρώπινα; καλοῦ δὲ ὄντος τούτου πῶς οὐ καὶ τὸ ξυνδικεῖν ἡμῖν γίγνοιτ' ἂν καλόν; ταῦτα οὖν τοιαῦτα ὄντα διέβαλέ τις κακή, καλὸν ὄνομα προστησαμένη, τέχνη, ἣ πρῶτον μὲν δή φησιν εἶναί τινα δικῶν μηχανήν, εἶναι δ' αὐτὴν τῷ τε δικάσασθαι καὶ ξυνδικεῖν ἄλλῳ νικᾶν δυναμένην, ἄν τ' οὖν δίκαια ἄν τε μὴ τὰ περὶ τὴν δίκην ἑκάστην ᾖ πεπραγμένα· δωρεὰν δ' αὐτῆς εἶναι τῆς τέχνης καὶ τῶν λόγων τῶν ἐκ τῆς τέχνης, ἂν ἀντιδωρῆταί τις χρήματα. ταύτην οὖν ἐν τῇ παρ' ἡμῖν πόλει, εἴτ' οὖν τέχνη εἴτε ἄτεχνός ἐστί τις ἐμπειρία καὶ τριβή, μάλιστα μὲν δὴ χρεών ἐστι μὴ φῦναι, δεομένου δὲ τοῦ νομοθέτου πείθεσθαι καὶ μὴ ἐναντία δίκῃ φθέγγεσθαι, πρὸς ἄλλην δὲ ἀπαλλάττεσθαι χώραν, πειθομένοις μὲν

σιγή, ἀπειθοῦσι δὲ φωνὴ νόμου ἥδε· ἄν τις δοκῇ πειρᾶσθαι τὴν τῶν δικαίων δύναμιν ἐν ταῖς τῶν δικαστῶν ψυχαῖς ἐπὶ τἀναντία τρέπειν καὶ παρὰ καιρὸν πολυδικεῖν τῶν τοιούτων ἢ καὶ ξυνδικεῖν, γραφέσθω μὲν ὁ βουλόμενος αὐτὸν κακοδικίας ἢ καὶ ξυνδικίας κακῆς, κρινέσθω δὲ ἐν τῷ τῶν ἐκλεκτῶν δικαστηρίῳ, ὄφλοντος δὲ τιμάτω τὸ δικαστήριον εἴτε φιλοχρηματίᾳ δοκεῖ ὁρᾶν τὸ τοιοῦτον εἴτε φιλονεικίᾳ, καὶ ἐὰν μὲν φιλονεικίᾳ, τιμᾶν αὐτῷ τὸ δικαστήριον ὅσου χρὴ χρόνου τὸν τοιοῦτον μηδενὶ λαχεῖν δίκην μηδὲ ξυνδικῆσαι, ἐὰν δὲ φιλοχρηματίᾳ, τὸν μὲν ξένον ἀπιόντα ἐκ τῆς χώρας μήποτε πάλιν ἐλθεῖν ἢ θανάτῳ ζημιοῦσθαι, τὸν ἀστὸν δὲ τεθνάναι φιλοχρημοσύνης ἕνεκα τῆς ἐκ παντὸς τρόπου παρ' αὐτῷ τιμωμένης· καὶ ἐάν τις φιλονεικίᾳ κριθῇ δὶς τὸ τοιοῦτον δρᾶν, τεθνάτω.

PLATO, *Laws*, XI. 937 D-938 C.

GENERAL PAPER.

WEDNESDAY, *5th April* 1899.—2 *to* 5 *o'clock.*

I. Translate, with notes on the Syntax :—

(1) οὐρανῷ ἐστήριξε κάρη.

(2) εἰ τούτω κε λάβοιμεν, ἀροίμεθά κε κλέος ἐσθλόν.

(3) οὐκ ἄν τοι χραίσμῃ κίθαρις τά τε δῶρ' Ἀθροδίτης,
ἥ τε κόμη τό τε εἶδος, ὅτ' ἐν κονίῃσι μιγείης.

(4) καί ποτέ τις εἴπῃσιν.

(5) ὥς μ' ὄφελ' ἤματι τῷ, ὅτε με πρῶτον τέκε μήτηρ,
οἴχεσθαι προφέρουσα κακὴ ἀνέμοιο θύελλα,
ἔνθα με κῦμ' ἀπόερσε πάρος τάδε ἔργα γενέσθαι.

(6) ὀυσμενέες δ' ἄνδρες σχεδὸν εἶαται, οὐδέ τι ἴδμεν
μή πως καὶ διὰ νύκτα μενοινήσωσι μάχεσθαι.

Punctuate these lines as you think best.

(7) τρέσσε δὲ παπτήνας ἐφ' ὁμίλου, θηρὶ ἐοικώς,
ἐντροπαλιζόμενος, ὀλίγον γόνυ γουνὸς ἀμείβων.

II. Translate, with explanatory notes :—

(1) καὶ ταύταν μὲν παλαιότεροι
ὁδὸν ἀμαξιτὸν εὗρον· ἕπομαι δὲ καὶ αὐτὸς ἔχων μελέταν·

τὸ δὲ πὰρ ποδὶ ναὸς ἑλισσόμενον αἰεὶ κυμάτων
λέγεται παντὶ μάλιστα δονεῖν
θυμόν.

(2) ἐὼν δ' ἐγγὺς Ἀχαιὸς οὐ μέμψεταί μ' ἀνὴρ
Ἰονίας ὑπὲρ ἁλὸς οἰκέων· προξενίᾳ πέποιθ'· ἔν τε δαμότais
ὄμματι δέρκομαι λαμπρόν, οὐχ ὑπερβαλών,
βίαια πάντ' ἐκ ποδὸς ἐρύσαις, ὁ δὲ λοιπὸς εὔφρων
ποτὶ χρόνος ἔρποι.

(3) εἰ δ' ὄλβον ἢ χειρῶν βίαν ἢ σιδαρίταν ἐπαινῆσαι πόλεμον
δεδόκηται, μακρὰ δὴ
αὐτόθεν ἅλμαθ' ὑποσκάπτοι τις· ἔχω γονάτων ἐλαφρὸν
ὁρμάν.
καὶ πέραν πόντοιο πάλλοντ' αἰετόι.

III. Translate, with notes on the words underlined :—

(*a*) μετοικίαν δ' ἐμὴν
εὐσεβοῦντες οὕτι μέμψεσθε συμφορὰς βίου.

Quote other examples of this meaning of *συμφορά*.

(*b*) οὐπώποτ' εἶπον μαντικοῖσιν ἐν θρόνοις,
οὐκ ἀνδρός, οὐ γυναικός, οὐ πόλεως πέρι,
ὃ μὴ κελεύσει Ζεὺς Ὀλυμπίων πατήρ.

Emend the MS. reading (*κελεύσει*). What objections might be made to the emendation of Hermann (*κελεύσαι*) on grounds of both Accidence and Syntax?

(*c*) ἕδραν ἔχουσα πρὸς δόμοις Ἐρεχθέως.

What building is alluded to? Where did Aeschylus locate the temple of the Erinnyes? Illustrate your answer by drawing a plan of the Acropolis.

(*d*) οὐκ ἔσθ' ὅπως λέξαιμι τὰ ψευδῆ καλά.

Discuss the meaning of the Optative, and quote parallel passages.

(*e*) ἄκος δ' οὐδὲν ἐπήρκεσαν
τὸ μὴ πόλιν μὲν ὥσπερ οὖν ἔχει παθεῖν.

(*f*) τόσον περ εὔφρων, καλά,
δρόσοισι λέπτοις μαλερῶν λεόντων.

What illustration of this meaning of δρόσοι may be drawn from the tradition preserved by Pausanias as to the Ἀρρηφόροι (or Ἑρσεφόροι)?

IV. Translate, with explanatory notes:—

(1) μηδὲ νόμον ἐπ' ἀνδρὶ ἐξεῖναι θεῖναι, ἐὰν μὴ τὸν αὐτὸν ἐπὶ πᾶσιν Ἀθηναίοις.

(2) ἐνταῦθα γὰρ κελεύει δίκας ὑπέχειν ὁ νόμος, ἐάν τις ἐπ' ἀκουσίῳ φόνῳ πεφευγώς, μήπω τῶν ἐκβαλόντων αὐτὸν ἠδεσμένων, αἰτίαν ἔχῃ ἑτέρου φόνου ἑκουσίου. καὶ οὐχ, ὅτι δεῦρο οὐχ οἷόν τε ἐλθεῖν αὐτῷ, παρεῖδεν αὐτὸν ὁ ταῦτα ἕκαστα τάξας, οὐδ', ὅτι καὶ πρότερόν τι τοιοῦτον ἐποίησε, καὶ δὴ τὴν ὁμοίαν ἐποιήσατο πιστὴν αἰτίαν κατ' αὐτοῦ.

(3) κελεύει γὰρ ἕκαστον (sc. νόμον) ἀφ' ἧς ἡμέρας ἐτέθη κύριον εἶναι, πλὴν εἴ τῳ χρόνος προσγέγραπται, τούτῳ δὲ τὸν γεγραμμένον ἄρχειν.

(4) καὶ γὰρ ἐν τοῖς αὐτοῖς καὶ τὰ αὐτὰ μιμεῖσθαι ἔστιν ὁτὲ μὲν ἀπαγγέλλοντα (ἢ ἕτερόν τι γιγνόμενον, ὥσπερ Ὅμηρος ποιεῖ, ἢ ὡς τὸν αὐτὸν καὶ μὴ μεταβάλλοντα), ἢ πάντας ὡς πράττοντας καὶ ἐνεργοῦντας τοὺς μιμουμένους.

(5) διὸ οὔτε πάμμικρον ἄν τι γένοιτο καλὸν ζῷον, συγχεῖται γὰρ ἡ θεωρία ἐγγὺς τοῦ ἀναισθήτου χρόνου γινομένη, οὔτε παμμέγεθες . . .

(6) τοιαῦται δὲ (sc. πράξεις) ποιοῦνται ὑπὸ μὲν τῶν φαύλων ποιητῶν δι' αὐτούς, ὑπὸ δὲ τῶν ἀγαθῶν διὰ τοὺς ὑποκριτάς· ἀγωνίσματα γὰρ ποιοῦντες καὶ παρὰ τὴν δύναμιν παρατείνοντες μῦθον πολλάκις διαστρέφειν ἀναγκάζονται τὸ ἐφεξῆς.

(7) ἔστι δὲ περιπέτεια μὲν ἡ εἰς τὸ ἐναντίον τῶν πραττομένων μεταβολή.

History.

Two *Questions should be attempted in this Group.*

(1) On what evidence does the tradition of the Dorian

invasion rest? Describe the civilisation of the Peloponnesus prior to that event, and state how far the Dorians are known to Homer.

(2) *φιλοκαλοῦμεν γὰρ μετ' εὐτελείας, καὶ φιλοσοφοῦμεν ἄνευ μαλακίας· πλούτῳ τε ἔργου μᾶλλον καιρῷ ἢ λόγου κόμπῳ χρώμεθα.*

From what sources did the Athenians of the age of Pericles derive their wealth? Consider the attitude of the Athenian philosophers as to legitimate modes of making money.

(3) What account is given in the *Ἀθηναίων Πολιτεία* of—

(*a*) the early history of the archonship,

(*b*) the legislation of Draco,

(*c*) the downfall of the Areopagus?

Notice any historical difficulties which present themselves in regard to any of the facts.

(4) What safeguards were provided against hasty change in the constitution of Greek democracies?

(5) Sketch the organisation of any religious or learned societies in the Hellenic world.

Literature.

Two *Questions should be attempted in this Group.*

(1) Give the arguments for and against the European origin of the Homeric Poems.

(2) Compare the story of Agamemnon, as told by Homer, with the Aeschylean version. In what respects does the Homeric treatment of the character of Helen differ from that of Aeschylus and later poets?

(3) "The average ability of the Athenian race is at the lowest possible estimate very nearly two grades higher than our own—that is about as much as our race is above the African negro."

F. Galton.

Estimate the amount of truth in this statement, taking into account the approximate population of Athens in the time of

Pericles, as compared with the population of Great Britain at the present day.

(4) What are the natural divisions of a Greek or Latin play? On what authority does the division of Latin comedies into five acts and a number of scenes in each rest?

(5) Give examples of cases in which the study of inscriptions has confirmed or supplemented the texts of the Greek historians or orators.

(6) When and with whom did the following forms of literature originate:—(*a*) Iambic poetry, (*b*) Parody, (*c*) Mimes and Dialogues, (*d*) Memoirs, (*e*) Prose Romances? Describe briefly the character of each.

(7) What appears to be Aristotle's general estimate of Euripides as a tragedian? In constructing your answer, take account of the special notices of Euripides in the *Poetics*, and of any principles of Aristotelian criticism which are applicable to his plays.

THURSDAY, *6th April* 1899.—9 *to* 12 *o'clock.*

For Greek Prose:—

Some one has said that the two things of all others in the world that are worth considering and worth talking about, are religion and politics. I want to ask you whether the future is to be no better than the past? Do we march or do we not to a brighter time? For myself, as you know, it will not be possible for me to see it; but even while the sands of life are running out, it may be one's duty, if even in the smallest degree, to promote it. To you who have done me the honour to invite me here to address you, I would say that you have the prospect of witnessing the transaction of the public policy of your country for forty or fifty, or it may be even for more years to come. Upon you, and such as you, depends greatly our future. What

I want to ask you is—whether you will look back upon the past and examine it carefully. Look round you in the present, and see what exists, and endeavour, if it be possible, to give a better and a higher tone to our national policy for the future. To me it appears that we have trodden for two centuries past—I keep myself to that, because since that time the public opinion of the country has had greatly increased influence—in the footsteps of the Cæsars, and have accepted the barbarous policy of pagan Rome; while at the same time, with a vast and an unconscious hypocrisy we have built thousands of temples, and have dedicated them to the Prince of Peace. I say—I say it with grief and shame—that they who have ministered at his altars have, for the most part, on these matters been absolutely dumb. Sir, I ask you this question, shall we reverse this policy? Shall we strive to build up the honour—the true honour, and the true happiness of any of our people on the firm basis of justice, morality, and peace?

BRIGHT.

COMPARATIVE PHILOLOGY.

FRIDAY, *7th April* 1899.—2 *to* 5 P.M.

(EIGHT *of the following questions to be answered.*)

1. Explain the distinctive features of Inflectional language as compared with other forms of speech.

2. Define the nature, and state the limitations, of Grimm's Law.

3. Discuss the probable origin of the Augment, and its influence on the development of the verb-system.

4. Explain the Latin tense-formations with *-bam*, *-bo*, *-vi*.

5. Exemplify (if possible by corresponding forms) *five* different modes of present-stem formation.

6. Explain exactly the formation of the different kinds of Aorists in Greek.

7. Discuss the form and function of reduplication in the verbal systems.

8. Show what modifications the original Locative case-suffixes have undergone in Greek and Latin.

9. How are the original combinations *sr*, *sn*, and *sm* treated in Greek and Latin?

10. Show what you understand by *heteroclite* nouns.

11. Analyse, and explain briefly, the formation of *twelve* of the following words, giving cognates where you can:—fuām, ἔτλᾱς, erit, εἰπόμην, malumus, εἴθιζον, fūnebris, ἔαται, jubet, ἔδμεναι, omnis, ἀνθρώπου, cuius, φθίσθαι, nostrum, βάσκοιμι, docuistis, σχές, vel.

12. Give cognates, and, if possible, the etymology of *twelve* of the following words:—ἅμα, vetus, τοῖχος, nivosus, δαήρ, memor, κρέας, imber, νεφέλη, quies, θήραζε, terreo, βραδύς, humus, τλάω, fundo, φαρόω, sŏlum.

CLASSICAL ARCHÆOLOGY.—(Optional Subjects.)

FIRST PAPER.

FRIDAY, *7th April* 1899.—9 *to* 12 *o'clock.*

(*Candidates should attempt* TWO *of the questions on Vase Painting, with not more than* SEVEN *of the General Questions.*)

Vase Painting.

1. Write a notice of the vases called "Melian," and explain their position in the development of Greek vase decoration.

2. Give an account of the subjects usually represented on sepulchral vases, both in earlier and later times.

3. What do you know of the work of the masters Nikosthenes and Euphronios?

General Questions.

4. Sketch the architectural history of the Athenian Acropolis, from the Persian wars to the completion of the Propylæa.

5. What links are there between the Art of Mycenæ and that of historic Greece?

6. How does the palace at Tiryns differ (*a*) from the Homeric house; (*b*) from the normal Greek house of historic times?

7. What evidence is afforded by the Heræum at Olympia as to the early history of Doric architecture?

8. Summarise the evidence for and against the existence of a raised stage in the Greek Theatre (*a*) in the time of Vitruvius; (*b*) in the fifth century B.C.

9. What are the usual parts of a Greek temple to which sculptural decoration is applied, and how do the prescribed conditions in each case affect the subject and style of treatment?

10. What do you know of the application of colour to sculpture at various periods of Greek art?

11. Give a short account of the various methods of casting a bronze statue; what evidence is there as to which of these methods were used by ancient statuaries?

12. *Ἐν τοῖς πρῶτοι δὲ Ἀθηναῖοι τόν τε σίδηρον κατέθεντο καὶ ἀνειμένῃ τῇ διαίτῃ ἐς τὸ τρυφερώτερον μετέστησαν. καὶ οἱ πρεσβύτεροι αὐτοῖς τῶν εὐδαιμόνων διὰ τὸ ἁβροδίαιτον οὐ πολὺς χρόνος ἐπειδὴ χιτῶνάς τε λινοῦς ἐπαύσαντο φοροῦντες καὶ χρυσῶν τεττίγων ἐνέρσει κρωβύλον ἀναδούμενοι τῶν ἐν τῇ κεφαλῇ τριχῶν· ἀφ' οὗ καὶ Ἰώνων τοὺς πρεσβυτέρους κατὰ τὸ ξυγγενὲς ἐπὶ πολὺ αὕτη ἡ σκευὴ κατέσχεν. μετρίᾳ δ' αὖ ἐσθῆτι καὶ ἐς τὸν νῦν τρόπον πρῶτοι Λακεδαιμόνιοι ἐχρήσαντο. . . .*—(Thuc. i. 6. 2.)

Illustrate this passage (which you need not translate) from the extant monuments.

13. *Οἱ δὲ Σάμιοι τὴν δεκάτην τῶν ἐπικερδίων* (of their voyage to Tartessos) *ἐξελόντες ἐξ τάλαντα ἐποιήσαντο χαλκήιον κρητῆρος Ἀργολικοῦ τρόπον· περιξ δὲ αὐτοῦ γρυπῶν κεφαλαί οἱ πρόκροσσοί εἰσι· καὶ ἀνέθηκαν ἐς τὸ Ἡραῖον ὑποστήσαντες αὐτῷ τρεῖς χαλκέους κολοσσοὺς ἑπταπήχεας, τοῦσι γούνασι ἐρηρεισμένους.*

(Herod. iv. 152.)

Illustrate this statement from monuments, either extant or known from literary sources.

14. Explain the terms:—*σφυρήλατος—πρόπλασμα—ἀκρόλιθος—γάνωσις—ἐπιστύλιον—ἀνθέμιον—πτερόν—entasis—spira—scotia—torus—sima.*

SECOND PAPER—*First Part.*

FRIDAY, *7th April* 1899.—2 *to* 3 *o'clock.*

Write an Essay on *one* of the two following subjects:—

The characteristics of the Art of Scopas, with special reference to distinctions that have been drawn between the sculpture of the fourth and that of the fifth century B.C.

Or,

The influence of Alexander and his conquests upon the history of Greek Art.

(*An hour is allowed for the Essay.*)

SECOND PAPER—*Second Part.*

FRIDAY, *7th April* 1899.—3 *to* 5 *o'clock.*

(*Not more than* SEVEN *questions to be attempted.*)

1. *Δαίδαλος ἄριστος ἀγαλματοποιὸς ἐπιγεγονὼς πρῶτος ἀναπετάννυσί τε τὰ τούτων βλέφαρα, ὡς δόξαι βλέπειν αὐτὰ, καὶ τοὺς πόδας, ὡς νομίσαι βαδίζειν, διίστησι. καὶ διὰ τοῦτο δεδέσθαι, ἵνα μὴ φύγωσιν, ὡς δῆθεν ἐμψύχων ἤδη γεγονότων αὐτῶν.*—(S. Q. 125.)

Criticise the historical value of this statement.

2. Give a short account of the following: Smilis—Gitiadas—Onatas—Archermos—Endoeos.

3. Describe the group of the Tyrannicides at Naples, and consider its authorship.

4. Describe the Discobolus of Myron, and discuss its artistic character.

5. What is the subject of the eastern pediment of the temple of Zeus at Olympia? Criticise its composition.

6. What are the various stories as to the trial and death of Pheidias? How do they affect our notions as to his artistic career?

7. Summarize the contents of the Parthenon frieze, and mention any peculiarities of design or execution due to its position on the building.

8. Compare the Victory of Paeonius with the Victory of Samothrace, and show how each is characteristic of its period.

9. Describe briefly the sculpture of the Great Altar of Pergamum.

10. Write a notice of the works of the school of Pasiteles. How far are they to be considered as copies or imitations of earlier statues?

ANCIENT PHILOSOPHY (Optional Subject.)

Earlier Period.

Friday, 7*th April* 1899.—9 *to* 12 *o'clock.*

1. Give a short account of the philosophy of Heraclitus, and indicate its relation to preceding and contemporary thought.

2. Compare carefully the conceptions of matter held by Anaxagoras and Democritus. To what extent is it correct to describe the former as an "atomist"?

3. Describe Socrates' attitude towards the Sophists (as represented in the dialogues of Plato).

4. Explain carefully Plato's theory of *ἀνάμνησις.*

5. Translate and explain:—

(*a*) *οἱ μὲν γὰρ ἓν ποιήσαντες τὸ ὂν σῶμα τὸ ὑποκείμενον . . . τἆλλα γεννῶσι πυκνότητι καὶ μανότητι πολλὰ ποιοῦντες . . . οἱ δ' ἐκ τοῦ ἑνὸς ἑτοίσας τὰς ἐναντιότητας ἐκκρίνεσθαι, ὥσπερ Ἀναξίμανδρός φησι καὶ ὅσοι δ' ἓν καὶ πολλά φασιν εἶναι.*

(*b*) *γαίης μὲν τόδε πεῖρας ἄνω πὰρ ποσσὶν ὁρᾶται*
αἰθέρι προσπλάζον, τὰ κάτω δ' ἐς ἄπειρον ἱκάνει.

(*c*) οὐδὲ διαίρετόν ἐστιν, ἐπεὶ πᾶν ἐστιν ὁμοῖον·
οὐδέ τι τῇ μᾶλλον, τό κεν εἴργοι μιν συνέχεσθαι,
οὐδέ τι χειρότερον· πᾶν δ' ἔμπλεόν ἐστιν ἐόντος.
τῷ συνεχὲς πᾶν ἐστιν, ἐὸν γὰρ ἐόντι πελάζει.

(*d*) διὸ καὶ συμβαίνει αὐτῷ τὸν εὐδαιμονέσταιον θεὸν ἧττον φρόνιμον εἶναι τῶν ἄλλων· οὐ γὰρ γνωρίζει τὰ στοιχεῖα πάντα· τὸ γὰρ νεῖκος οὐκ ἔχει, ἡ δὲ γνῶσις τοῦ ὁμοίου τῷ ὁμοίῳ.

(*e*) σκόπει δὴ αὖ καὶ τὴν τοῦ νοητοῦ τομὴν ᾗ τμητέον. πῇ; ᾗ τὸ μὲν αὐτοῦ τοῖς τότε τμηθεῖσιν ὡς εἰκόσι χρωμένη ψυχὴ ζητεῖν ἀναγκάζεται ἐξ ὑποθέσεων, οὐκ ἐπ' ἀρχὴν πορευομένη, ἀλλ' ἐπὶ τελευτήν, τὸ δ' αὖ ἕτερον τὸ ἐπ' ἀρχὴν ἀνυπόθετον ἐξ ὑποθέσεως ἰοῦσα καὶ ἄνευ ὧνπερ ἐκεῖνο εἰκόνων αὐτοῖς εἴδεσι δι' αὐτῶν τὴν μέθοδον ποιουμένη.

(*f*) ἐπώμεθα τῷ ἄρτι λόγῳ, μηδὲν αὐτὸ καθ' αὑτὸ ἓν ὂν τιθέντες· καὶ ἡμῖν οὕτω μέλαν τε καὶ λευκὸν καὶ ὁτιοῦν ἄλλο χρῶμα ἐκ τῆς προσβολῆς τῶν ὀμμάτων πρὸς τὴν προσήκουσαν φορὰν φανεῖται γεγενημένον, καὶ ὃ δὴ ἕκαστον εἶναί φαμεν χρῶμα, οὔτε τὸ προσβάλλον οὔτε τὸ προσβαλλόμενον ἔσται, ἀλλὰ μεταξύ τι ἑκάστῳ ἴδιον γεγονός.

(*g*) Θ. τὸ μὲν γὰρ ἦν διανοίας ἐν φωνῇ ὥσπερ εἴδωλον, τὸ δ' ἄρτι λεχθὲν διὰ στοιχείου ὁδὸς ἐπὶ τὸ ὅλον· τὸ δὲ δὴ τρίτον τί λέγεις; Σ. ὅπερ ἂν οἱ πολλοὶ εἴποιεν, τὸ ἔχειν τι σημεῖον εἰπεῖν ᾧ τῶν ἁπάντων διαφέρει τὸ ἐρωτηθέν.

Later Period.

Friday, 7*th April* 1899.—9 *to* 12 *o'clock.*

1. State Aristotle's general formula (κοινὸς λόγος) for ψυχή, explaining carefully the terms used in it.

2. What is Aristotle's conception of the method appropriate in Psychology?

3. Discuss the question of the order in which the dialogues of Plato were written.

4. Explain Aristotle's conception of *θεωρία* as the ultimate end.

5. Translate and explain :—

(*a*) Σ. *τί δὲ ὁ σός, ὦ Φίληβε, ἡδὺς καὶ ἄμικτος ὤν ; ἐν τίνι γένει τῶν εἰρημένων λεγόμενος ὀρθῶς ἄν ποτε λέγοιτο ; ὧδε δ' ἀπόκριναί μοι πρὶν ἀποφήνασθαι.* Φ. *λέγε μόνον.* Σ. *ἡδονὴ καὶ λύπη πέρας ἔχετον, ἢ τῶν τὸ μᾶλλόν τε καὶ ἧττον δεχομένων ἐστόν ;* Φ. *ναί, τῶν τὸ μᾶλλον, ὦ Σώκρατες· οὐ γὰρ ἂν ἡδονὴ πανάγαθον ἦν, εἰ μὴ ἄπειρον ἐτύγχανε πεφυκὸς καὶ πλήθει καὶ τῷ μᾶλλον.*

(*b*) Σ. *ἆρ' οὖν οὗτος ἱκανῶς ἐπιστήμης ἕξει κύκλον μὲν καὶ σφαίρας αὐτῆς τῆς θείας τὸν λόγον ἔχων, τὴν δὲ ἀνθρωπίνην ταύτην σφαῖραν καὶ τοὺς κύκλους τούτους ἀγνοῶν, καὶ χρώμενος ἐν οἰκοδομίᾳ καὶ τοῖς ἄλλοις ὁμοίως καινότι καὶ τοῖς κύκλοις ;* Π. *γελοίαν διάθεσιν ἡμῶν, ὦ Σώκρατες ἐν ταῖς θείαις οὖσαν μόνον ἐπιστήμαις λέγομεν.*

(*c*) *φυσικώτατον γὰρ τῶν ἔργων τοῖς ζῶσιν, ὅσα τέλεια καὶ μὴ πηρώματα, ἡ τὴν γένεσιν αὐτομάτην ἔχει, τὸ ποιῆσαι ἕτερον οἷον αὐτό, ζῷον μὲν ζῷον, φυτὸν δὲ φυτόν, ἵνα τοῦ ἀεὶ καὶ τοῦ θείου μετέχωσιν ᾗ δύνανται.*

(*d*) *πάντα δὲ πάσχει καὶ κινεῖται ὑπὸ τοῦ ποιητικοῦ καὶ ἐνεργείᾳ ὄντος. διὸ ἔστι μὲν ὡς ὑπὸ τοῦ ὁμοίου πάσχει, ἔστι δὲ ὡς ὑπὸ τοῦ ἀνομοίου, καθάπερ εἴπομεν.*

(*e*) *καὶ εὖ δὴ οἱ λέγοντες τὴν ψυχὴν εἶναι τόπον εἰδῶν, πλὴν ὅτι οὔτε ὅλη ἀλλ' ἡ νοητική, οὔτε ἐντελεχείᾳ, ἀλλὰ δυνάμει τὰ εἴδη.*

(*f*) *αἴτια δοκοῦσιν εἶναι φύσις καὶ ἀνάγκη καὶ τύχη, ἔτι δὲ νοῦς καὶ πᾶν τὸ δι' ἀνθρώπου.*

(*g*) *διωρισμένων δὲ τούτων ἐπισκεψώμεθα περὶ τῆς εὐδαιμονίας πότερα τῶν ἐπαινετῶν ἐστιν ἢ μᾶλλον τῶν τιμίων· δῆλον γὰρ ὅτι τῶν γε δυνάμεων οὐκ ἔστιν.*

(B)—MENTAL PHILOSOPHY.

LOGIC AND METAPHYSICS.

MONDAY, *3rd April* 1899.—9 *to* 12 *o'clock.*

1. Illustrate from the *Theaetetus* Plato's dependence on the Socratic account of knowledge; and consider in what respects the doctrine of the *Theaetetus* approximates to and differs from that of the *Republic.*

2. Explain the conception of human individuality made use of in Aristotle's *De Anima.* Consider its relation to Aristotle's idea of development, and its significance in mediaeval philosophy.

3. Explain and comment upon the following Spinozistic positions:—

(*a*) Intellectus actu, sive is finitus sit, sive infinitus, ad naturam naturatam, non vero ad naturantem, referri debet.

(*b*) Mentis idea et ipsa mens una eademque est res, quae sub uno eodemque attributo, nempe cogitationis, concipitur.

(*c*) Voluntas et intellectus unum et idem sunt.

4. (*a*) What explanation does Hegel offer in the *Encyclopaedia* of his famous *dictum*, "the real is the rational"? (*b*) How does Hegel distinguish the dialectical from the speculative stage of reason?

5. Indicate the chief lines of thought by which Lotze, in the first book of his Metaphysics, establishes a monistic theory of the universe.

TUESDAY, *4th April* 1899.—9 *to* 12 *o'clock.*

1. Explain and examine the view that Logic is the science of the form of thought.

Assuming the inadequacy of this account of Logic, how would you distinguish Logic from Metaphysics?

2. Explain, carefully, Aristotle's conception of Proof, and consider its relation to his account of Induction.

3. Examine the different views of Causality which are maintained by Mill. How far are they capable of being made consistent with one another, and how are they connected with his account—

(*a*) of Syllogism?
(*b*) of Induction?

4. In what sense do possibility and necessity form part of the subject-matter of Logic.

5. Give a careful account of the psychical functions involved in Belief. What is the significance of the distinction between Belief and Knowledge? In what sense may Belief be said to be independent of Proof?

TUESDAY, *4th April* 1899.—2 *to* 5 P.M.

1. State the difficulties connected with the relation of mental to organic changes; and consider how far these difficulties are met by the statement, "The soul and its organism are each a phenomenal series. Each, to speak in general, is implicated in the changes of the other."

2. Consider the psychological significance of recollection and recognition. What conclusions as to mental development are suggested by the diseases of memory?

3. Give a historical account of the theory of Association of Ideas. What is meant by Apperception, and how far is it to be regarded as a principle supplementary to Association in the psychological explanation of knowledge?

4. Explain and criticise the theory of Emotional States which is associated with the names of James and Lange.

5. Explain carefully the *positive* results which Kant arrives at in the *Critique of Pure Reason* with respect to the Ideas of

the Reason. Compare Kant's position, as stated there and in the two later Critiques with a doctrine of Absolute Idealism like Hegel's.

MORAL PHILOSOPHY.

MONDAY, *3rd April* 1899.—2 *to* 5 P.M.

1. Examine the significance of the Socratic doctrine, that "Virtue is Knowledge." Illustrate, from the dialogue *Protagoras*, the views with which it is to be compared, and consider its relation to the Socratic method, and to Socrates' account of the content of moral judgment.

2. Consider the significance of Plato's Ideal Theory (*a*) for his conception of the significance of virtue, (*b*) for his view of the way in which virtue is to be attained.

3. Give a careful account of the argument by which Aristotle shows:—

(*a*) that εὐδαιμονία is τέλος τέλειόν.

(*b*) εὐδαιμονία depends upon ἀρετή.

4. How is moral obligation explained by Mill and by Spencer? Critically compare, with their accounts of it, that offered by Sidgwick.

5. Explain Hegel's theory of the relation of Abstract Right to Morality. Illustrate, by considering the relation of property to these stages in the development of the Idea of Right.

WEDNESDAY, *5th April* 1899.—9 A.M. *to* 12 *o'clock.*

1. In what senses is the word "freedom" applied to human conduct? Illustrate historically its different applications, and consider how far it is possible to connect them with one another.

2. To what extent is it the case that Kant's theory of

Practical Reason corrects the Agnosticism to which his criticism of Speculative Reason leads him?

3. Critically examine Green's statement that character is the result of "the reaction of the self upon circumstances." How far is this statement consistent with his account of the self as the "timeless" condition of action and experience?

4. Consider the relation of moral experience to the teleological interpretation of nature.

5. Critically examine the following statement:—"Goodness is not absolute or ultimate; it is but one side, one partial aspect, of the nature of things. And it manifests its relativity by inconsistency, by a self-contradiction in principle, and by a tendency shown towards separation in that principle's working, an attempted division, which again is inconsistent and cannot rest in itself."

WEDNESDAY, *5th April* 1899.—2 *to* 5 P.M.

Write an Essay on—

"The History and Significance of the Idea of Natural Right."

Or,

"The so-called 'circular' character of ethical reasoning."

(C)—MATHEMATICS AND NATURAL PHILOSOPHY.

MATHEMATICS.

MONDAY, *3rd April* 1899.—9 A.M. *to* 12 NOON.

1. Find the equation of a conic in trilinear co-ordinates, the triangle of reference being a pair of tangents and their chord of contact.

Find the condition that this equation may represent a parabola.

2. Shew that the foci of $(a, b, c, f, g, h)(x, y, 1)^2=0$, the axes being rectangular, are the four points of intersection of a certain pair of rectangular hyperbolae.

A parabola touches the axes of x and y, and also the straight line $x+y-1=0$; shew, by means of the analysis above indicated, that the locus of the focus is given by $x^2+y^2-x-y=0$. Of what well-known property of the parabola is this a particular case?

3. Find the equation of the tangent to the conic $x^2/a^2+y^2/b^2-1=0$ in terms of the eccentric angle of the point of contact.

Prove that the feet of the four normals that can be drawn from any point to a conic lie on a rectangular hyperbola, whose asymptotes are parallel to the axes of the conic.

4. Prove that $ds/d\psi=p+dt/d\psi$, where s is the arc of a curve, ψ the inclination of the tangent to a fixed line, p the perpendicular from the origin on the tangent, and t the projection of the radius vector on the tangent.

Find the perimeters of the following curves:—(i) $r^2=a^2\cos 2\theta$; (ii) $x^{\frac{2}{3}}+y^{\frac{2}{3}}=a^{\frac{2}{3}}$.

5. Find an expression for the radius of curvature of a curve in terms of rectangular co-ordinates.

Prove that the radius of curvature of the envelope of $x\cos\alpha+y\sin\alpha=f(\alpha)$ is $f(\alpha)+f''(\alpha)$.

6. Find the centre and radius of curvature of any point on a roulette when the body and space centrodes are given.

Shew that at any instant the centres of curvature for all points of the moving figure that lie on a conic touching the body centrode at the instantaneous centre of rotation lie on a conic touching the space centrode at the same point. In particular, if the conic is a circle, the corresponding locus is also a circle touching the first at the instantaneous centre of rotation.

7. Find a formula of reduction for $\int d\theta \cos^m\theta \sin^n\theta$; and evaluate $\int d\theta \sin^4\theta \cos^2\theta$.

Evaluate $\int dx\,(x-p)\sqrt{(ax^2+2bx+c)}$ by means of the substitution $y(x-p)=\sqrt{(ax^2+2bx+c)}$.

8. Establish the relations between the roots and the coefficients of an equation; and shew how to find the sum of the powers of the roots in terms of the coefficients.

If $a+b+c+d=0$, $x+y+z+u=0$, $ax+by+cz+du=0$, prove that $2\Sigma a^4x=\Sigma a^2x\times\Sigma a^2$.

9. If the series Σu_n and Σv_n converge to S and T respectively, and at least one of the two be *absolutely* convergent, prove that $\Sigma(u_1v_n+u_2v_{n-1}+\ldots+u_nv_1)$ converges to ST.

Find the sum of $1+\frac{1}{3}-\frac{1}{5}-\frac{1}{7}+\frac{1}{9}+\frac{1}{11}-\frac{1}{13}-\frac{1}{15}+$ etc. to infinity.

10. Find the condition that the two planes through the origin which contain the lines $(x-a)/l=(y-b)/m=(z-c)/n$ and $(x-a')/l'=(y-b')/m'=(z-c')/n'$ respectively, be perpendicular.

Shew that, if P and Q be two points in two planes L and M respectively which intersect in the line N, then the necessary and sufficient condition that the normals to L and M at P and Q respectively intersect is that PQ be perpendicular to N.

11. Find an expression for the cosine of the angle between two directions in space (i) for rectangular co-ordinates; (ii) for oblique co-ordinates.

Two directions are given by $pl+qm+rn=0$ (1), $al^2+bm^2+cn^2=0$ (2). Find equations for the directions coplanar with these and inclined to them at a given angle α: and shew how to apply your method when (2) is replaced by $al^2+bm^2+cn^2+2fmn+2gnl+2hlm=0$.

12. Find the condition that three planes whose equations are given may have a common line of intersection.

Discuss the quadric surface

$$7x^2+6y^2+5z^2-4yz-6zx-8xy-16x+24y-8z=0.$$

13. Solve the following—

(i) $(D^2+4)(D^2+D+1)y=\cos 2x$.

(ii) $\dfrac{d^2x}{dt^2}+ax+by=c$, $\dfrac{d^2y}{dt^2}+a'x+b'y=c'$.

14. Find the lengths of the axes of the section of the quadric $\Sigma ax^2+2\Sigma fyz=1$ by the plane $\Sigma lx=0$.

Find the condition that $\Sigma lx=p$ may cut $\Sigma ax^2=1$ (i) in a parabola, (ii) in a circle; and find the latus rectum of the parabolic section.

MONDAY, *3rd April* 1899.—2 *to* 5 P.M.

1. If α, β, γ, δ be the roots of the biquadratic

$$x^4-px^3+qx^2-rx+s=0,$$

find the cubic whose roots are $\alpha\beta+\gamma\delta$, $\alpha\gamma+\beta\delta$, $\alpha\delta+\beta\gamma$; and shew that when one root of this cubic equation is known the solution of the biquadratic may be completed by means of quadratic equations.

How would you proceed to test whether a biquadratic with given rational numerical coefficient is or is not soluble by means of quadratic equations?

If all the determinants of the matrix

$$\begin{vmatrix} 1, & x, & x', & xx' \\ 1, & y, & y', & yy' \\ 1, & z, & z', & zz' \end{vmatrix}$$

find what relations follow between x, y, z, x', y', z'.

2. Prove that, if $a>+1$, then the limits when $n=\infty$ of a^n/n and $a^n/n!$ are ∞ and 0 respectively.

Find the limit of $\{(1+1/x)^x-1\}x$ when $x=0$.

3. Find the condition that the conic $(a, b, c, f, g, h)(x, y, 1)^2=0$ may be a rectangular hyperbola: and explain how the corresponding condition may be obtained for $(a, b, c, f, g, h)(x, y, z)^2=0$ where x, y, z are triple (say trilinear) co-ordinates.

A rectangular hyperbola touches a fixed straight line at a fixed point O, and its centre always lies on a fixed straight line L passing through O: shew that the locus of the intersection of the hyperbola with its circle of curvature at O is a straight line through O perpendicular to L.

4. If the co-ordinates of a straight line be taken to be $p=x'-x''$, $q=y'-y''$, $r=z'-z''$, $\varpi=y'z''-y''z'$, $\rho=z'x''-z''x'$, $\sigma=x'y''-x''y'$, where (x', y', z') (x'', y'', z'') are the Cartesian co-ordinates of two points on it, find Cartesian equations to the straight line in terms of $p, q, r, \varpi, \rho, \sigma$; and deduce the conditions that the line lie in the plane $Ax+By+Cz+D=0$, carefully pointing out how many of these conditions are independent.

A straight line moves so that two fixed points on it lie in the planes of xy and xz respectively; find the equation in line-co-ordinates which defines the complex generated; and prove that the lines of the complex which lie in the plane of yz envelop a circular sextic.

5. Prove that, for any linear transformation which corresponds to change from one set of Cartesian axes to another, both of which are rectangular, the three functions $a+b+c$, $bc+ca+ab-f^2-g^2-h^2$, $abc+2fgh-af^2-bg^2-ch^2$ of the coefficients of the quadric $\Sigma ax^2+2\Sigma fyz+2\Sigma lx+d=0$ are invariant.

Find the form of the equation to a central quadric when the co-ordinate planes are its real central cyclic planes and the principal plane perpendicular to them. Deduce the condition that the cyclic planes of $\Sigma ax^2+2\Sigma fyz+2\Sigma lx+d=0$ be perpendicular.

6. Defining an apse on a curve as a point at which the circle of curvature has contact of the third order with the curve, shew that the condition for an apse is

$$\left\{1+\left(\frac{dy}{dx}\right)^2\right\}\frac{d^3y}{dx^3}-3\frac{dy}{dx}\left(\frac{d^2y}{dx^2}\right)^2=0.$$

Trace the curve $x^5-y^5+x^4+y^4-x^2=0$; and examine, in particular, whether it has a double point in the first quadrant.

7. Trace the curve $x^4y^2+2x^2y^2+y^2-x+1=0$: and shew that its whole area is $\pi/2\ \sqrt[4]{2}\sin\frac{3\pi}{8}$.

[Given $z^4+2z^2+2\equiv(z^2+2pz+q)(z^2-2pz+q)$, where

$$p=\sqrt[4]{2}\cos\frac{3\pi}{8},\text{ and } q=\sqrt{2}.]$$

8. Prove that, if $X=ax^2+2bx+c$, and $\phi(x, X)$ be a rational function of x and X, the integral $\int dx\,\phi(x, X)$ can be rationalised in a onefold infinity of ways by means of a quadratic rational transformation.

Evaluate $\int dx/(x^2-1)\sqrt{(x^2+1)}$.

9. Find a formula for the cubature of a solid of revolution.

A solid in the form of a paraboloid of revolution is made up of layers bounded by paraboloids of revolution having the same vertex and the same axis as the outer boundary surface. The density of each layer is proportional to the latus rectum of the corresponding paraboloid. Calculate the mass of the solid; and find its centre of inertia.

10. Assuming that

$$\tan\frac{\theta}{2}=\frac{2}{\pi-\theta}-\frac{2}{\pi+\theta}+\frac{2}{3\pi-\theta}-\frac{2}{3\pi+\theta}+\ \ldots\ \text{ad}\infty,$$

prove that $\int_0^\infty dx\sin mx/x=\pm\frac{1}{2}\pi$, according as m is positive or negative.

Shew that $\int_0^\infty dx\sin^3 x/x^3=3\pi/8$.

11. Shew that the transformation of a curve into its pedal is a contact transformation, whose equations are

$$\xi=\frac{(xp-y)p}{1+p^2},\quad \eta=-\frac{xp-y}{1+p^2},\quad \varpi=\frac{xp^2-2yp-x}{yp^2+2xp-y};$$

$$x=\frac{(\xi^2-\eta^2)\varpi-2\xi\eta}{\varpi\xi-\eta},\quad y=\frac{2\xi\eta\varpi+\xi^2-\eta^2}{\varpi\xi-\eta},\quad p=-\frac{\xi}{\eta}.$$

Discusss the nature of the integrals of the equation

$(y^2-a^2)p^2-2xyp-y^2=0$, at points on the circle $x^2+y^2-a^2=0$, in particular at the point $(a/\sqrt{2}, a/\sqrt{2})$.

12. Prove that, if a particular integral of the equation $y'+f(x)y^2=g(x)$ be known, its integration can be effected by quadratures. Illustrate by integrating the equation $y'+y^2=1/(1-\sin x)$, which has the particular integral $y=\sec x$.

Integrate $xyy''-4xy'^2+4yy'=0$.

13. Find the differential equation of the family of curves each of which has the property that the projection of the foot of the ordinate on the tangent lies on the y-axis. Give a figure shewing the nature of the integral curves.

14. Transform the system

$$\frac{\delta u}{\delta x}=\frac{\delta v}{\delta y}, \quad \frac{\delta u}{\delta y}=-\frac{\delta v}{\delta x}$$

into another in which the independent variables are u and v and the dependent variables x and y: and explain the significance of your result.

Find the integral threefold of the differential equation

$$\frac{\delta z}{\delta x_1}\frac{\delta z}{\delta x_2}\frac{\delta z}{\delta x_3}=8x_1x_2x_3$$

which contains the twofold $z=3$, $x_1x_2x_3=1$.

15. Find the differential equations for the lines of curvature of the paraboloid $2z=x^2/a+y^2/b$; and shew that their projections on the plane of xy are a family of conics given by $x^2/\alpha^2+y^2/\beta^2=1$, where $b\alpha^2-a\beta^2=ab(b-a)$.

TUESDAY, *4th April* 1899.—9 A.M. *to* 12 NOON.

Write dissertations on not more than *two* of the following Subjects:—

1. The projective properties of a one-one-correspondence, with applications to the geometry of the linear Complex.

2. The Convergence of Multiple Integrals, with examples of triple integrals.

3. The form of plane Algebraic Curves at infinity.

4. The expansion of an Algebraic Function in series of integral or fractional powers of x or $1/x$.

5. The Γ-function.

6. The integration of systems of ordinary differential equations, especially of linear systems with constant coefficients.

NATURAL PHILOSOPHY.

FIRST PAPER.

TUESDAY, *4th April* 1899.—2 *to* 5 P.M.

[*In returning answers, keep those to X, XI, XII separate from the others.*]

1. Form the equation of motion of a particle constrained to move on a given curve under the action of given forces. What are the conditions that this motion shall be free? Show that a circle may be described freely under the action of a force directed to a point in the circumference and varying inversely as the fifth power of the distance from that point.

2. Find the usual expressions for the components of acceleration along and perpendicular to the radius vector of a particle moving with reference to any assumed origin. Deduce the equation of energy and the differential equation of the path when the accleration is central and a function of the distance from the centre. Prove that there are, at most, two apsidal distances.

Find the apsidal angle in the case of a particle attached to the end of an elastic string and describing a nearly circular orbit.

3. A uniform cylinder of radius a and mass m rests on a horizontal plane and supports (partially) a heavy plank of

length l and mass M which is hinged to the plane, the axis of the hinge being parallel to the axis of the cylinder. Investigate the motion of the system and find the angular speed of the plank and the pressure between it and the cylinder (1) when all the surfaces are smooth; (2) when the horizontal plane is rough so that the cylinder rolls.

4. A uniform circular disc is moving in its own plane with given linear and angular velocities. What impulse will turn its direction of motion through a right angle without change of speed, and at the same time reverse the angular speed? What condition must be satisfied that the impulse may act along a line which intersects the disc?

5. Investigate the tranverse vibratory motion of a uniform stretched string, and find the complete solution for the case in which the string is plucked at one-third its whole length from one end. Give expressions for the kinetic and potential energies.

6. Prove that the surface-integral of the normal force over any simply connected closed region is proportional to the algebraic sum of attracting and repelling matter within the region. Apply the theorem to a tube of force in the region bounded by two infinite coaxal cylindrical surfaces at given potentials, and thence deduce the capacity of unit length of the condenser so formed.

7. Give Green's Theorem concerning surface and volume integrals of potential functions. Use it to prove that, when the potential is constant over the surface of a closed region containing no attracting or repelling matter, it is constant throughout that region. Establish the same proposition by means of the theorem of the preceding question.

8. Apply the laws of thermodynamics to prove that the heat developed in a substance by adiabatic compression depends upon the expansibility of the substance at constant pressure. The expansibility of water near its maximum density point is

$(t-278)/72{,}000$, t being the absolute temperature. Find the change of temperature at 1° C. produced by a change of pressure of 200 atmospheres, taking 1 atmo. $=10^6$ C.G.S. units, and Joule's Equivalent $=42\times10^6$ C.G.S. units.

9. The earth moves round the sun with an average speed of 18·4 miles per second, and rotates on its axis in 1436 minutes; and the axis makes with the ecliptic an angle whose cosine is approximately ·4. Find the position of the axis of the resultant screw at the spring equinox, and the pitch of the screw-motion.

X. A ball is moving directly towards an equal ball at rest. What must be the mass of a third ball which, if interposed between them, will bring the first to rest at its second collision with it (coefficient of restitution $=1$).

XI. A windlass turning uniformly is employed to raise a chain coiled on the ground 10 feet below it. Find the tension at any point of the chain (1) while there is still some on the ground; (2) after it has wholly left the ground.

XII. A rope is passed over a pulley and supports a weight at one end. A man tries to ascend from the other end hand over hand. Find the conditions of his success.

SECOND PAPER.

WEDNESDAY, *5th April* 1899.—9 A.M. *to* 12 NOON.

1. Prove that the motion of the centre of mass of a system is that of a particle acted on by all the forces of the system.

If there be two particles of masses M and m prove that their moment of momentum and Kinetic Energy relative to the centre of mass are $\frac{M}{M+m}$ times the moment of momentum and Kinetic Energy of m relative to M.

A smooth straight tube of mass M can turn in one plane round a point about which its radius of gyration is k. A particle of

mass m is at rest in the tube at a distance c when the angular velocity is ω. Find the motion.

2. What are generalised co-ordinates? Give, in terms of these, Lagrange's Equations of Motion.

A light string of length l is attached to a point distant h from the centre of a sphere whose radius of gyration is k. Find, for small oscillations in one plane, the length of the longer equivalent simple pendulum as far as the second powers of the small quantities h and k.

3. Find the moment of a force about a line in space,

Prove that a force X, Y, Z along a generator of $x^2+y^2-z^2=a^2$ is equivalent to an equal force at the origin and a couple $\pm aX$, $\pm aY$, $\mp aZ$.

4. What are the laws of Friction? Explain why a train is more rapidly stopped by the brakes, when the wheels roll on the rails without skidding than when they skid.

A rough sphere is just supported against a fixed rough horizontal cylinder by a horizontal string from the top of the sphere to the top of the cylinder. Prove that the square of the tangent of the angle of friction is equal to the ratio of the radii of the sphere and cylinder.

5. From the second law of thermodynamics define entropy, and prove that it is a function of the state of the body.

Prove that if the energy of a body depends only on its temperature, then the absolute temperature divided by the pressure is a function of the volume only.

6. Investigate Euler's equations of motion of a rigid body with one point fixed.

From these equations deduce the constancy of the amount of moment of momentum if there be no external forces.

7. Find Poisson's extension of Laplace's differential equation to the potential of gravitating matter when the potential is taken at any point of the attracting mass.

Prove that the force at any point of a spherical hollow inside a uniform solid sphere is parallel to the line joining the two centres.

8. Investigate the speed of plane sound waves in air.

From your result calculate roughly the speed at $0°C$, given that, at this temperature and under a pressure of 760 *mm.* of Mercury (*sp. gr.* = 13·6), the specific gravity of air is ·00129.

9. Show how to find the shape of a rectangular beam under given forces in one plane through its length.

Work out the case of a beam clamped horizontally at one end.

10. How is a strain specified? Explain what is meant by the strain ellipsoid, and show how to find its axes for any given strain.

11. Find for unit mass at any point the attraction of an infinite uniform plane disc of attracting matter.

Hence prove that close to an electrified conductor of finite curvature the force due to the electrification in the neighbourhood is equal to that due to all the rest of the system.

12. When may two rigid bodies be said to be dynamically equivalent?

Prove that a uniform triangular disc is equivalent to three equal particles, each $\frac{1}{3}$ of its mass, placed at the middle points of its sides.

THIRD PAPER.

WEDNESDAY, *5th April* 1899.—2 *to* 5 P.M.

[*Keep apart answers to the first and second halves of this paper.*]

1. Define a perfect liquid, and investigate the equations of its motion and continuity.

2. Discuss the "Thermodynamic Functions" and their representation by means of surfaces. Discuss any one of these with special reference to water substance.

3. Discuss the method of images as applied to the solution of problems in statical electricity or other branches of physics. Treat the case of two spheres.

4. Find the relation between the stresses on the three co-ordinate planes and the stress on any given plane at a point of a body.

5. Discuss the motion for small plane oscillations of a heavy uniform chain hanging by one end.

6. Investigate the motion of a water-wave running partly by gravity and partly by surface tension.

VII. Prove that two pure strains in succession leave three directions (not generally rectangular) unaltered.

VIII. A particle, describing an elliptic orbit about the centre, is disturbed by a small force in the normal to its path, and varying directly as the speed. Find the consequent displacement of the apses.

IX. Investigate the steady motion of electric currents in an infinite uniform conducting plate.

Find the stream lines when one pole of a battery is connected to the plate at two points, while the other is connected to the point midway between these.

X. Show that a distribution of heat producing temperature $v = A \sin mr/r$, where r is the distance from the centre of a uniform conducting sphere, *may* preserve its type as the sphere cools. What is the necessary condition, and what the rate of loss of heat per unit surface when it is satisfied?

XI. Find the potential, at any distant point, due to a system of three equal bar magnets which form non-parallel and non-intersecting edges of a cube.

XII. Can the velocity-potential in two-dimensional motion of a perfect fluid be of the form

$$\phi = A\left(1+\frac{a^2}{r^2}\right)r\cos\theta - B\theta\,?$$

If so, what is the general nature of the motion, and what the total resultant pressure on unit length of the cylinder $r=a$?

(D)—ENGLISH (Language, Literature, and British History).

ENGLISH.

FIRST PAPER.

FRIDAY, 31*st March* 1899.—9 *to* 12 *o'clock.*

[*Not more than* EIGHT *questions should be attempted.*]

1. Say succinctly what Aristotle deems to be the traits of the tragic hero. Shortly discuss Macbeth, Samson Agonistes, and Byron's Cain as tragic heroes.

2. How far is the conception of Style in the ancient critics affected by the ideals of Oratory?

3. What is the precise sense in which Longinus uses the term ὕψος? Repeat what you think the most vital and durable part of his analysis.

4. What was Dante's immediate object in seeking for the "illustre volgare"? Give in Latin and English, and explain, its four characteristics.

5. What was the general scope of English Criticism before Dryden, and why was that scope so restricted?

6. Describe what you consider the best system of English Prosody, and weigh its merits against those of any other systems.

7. What is, or may be, meant by the "grand style"? Illustrate from the books in your Special Period.

8. Wherein does Coleridge find Wordsworth's poetical practice superior to Wordsworth's theory?

9. Discuss the various forms, and the history, of the English Ode.

10. What have been the phases, and what the fruits, of Spenser's influence?

11. What qualities raise Shakespeare above his dramatic contemporaries?

12. Account for the late growth of English fiction.

SECOND PAPER.

FRIDAY, 31*st March* 1899.—2 *to* 5 *o'clock.*

Write an Essay on *one* of the following subjects:—

1. The discussions concerning an English Academy.
2. The influence of French Literature upon English Literature.
3. The meaning of the terms "Romance" and "Romantic" in the Nineteenth Century.

THIRD PAPER.

SATURDAY, 1*st April* 1899.—9 *to* 12 *o'clock.*

[*Not more than* EIGHT *questions should be attempted.*]

1. What traces of an Eighteenth Century form and spirit can be traced in any poets of the early Nineteenth Century?

2. Write the life, with special reference to its literary demarcations, *either* of Wordsworth *or* of Coleridge.

3. Sketch the various ways in which Greek Literature left its mark on the poetry of this period down to 1850.

4. What were the contributions of Lamb and Hazlitt to the revival of Elizabethan Literature?

5. Characterise the lyrical genius of Sir Walter Scott.

6. Write brief descriptive and critical notes on *four* of the following: *Adam Blair*, *History of the Peninsular War*, *The Prophecy of Capys*, *Lectures on Heroes*, *Paracelsus*, *Peter Plymley's Letters*.

7. Discriminate and appreciate the main varieties of Blank Verse practised from 1800 to 1850.

8. Summarily state the labours and literary position of Ebenezer Elliott, Jeffrey, Maturin, Godwin, Beddoes.

9. What is the nature and value of the criticisms that depreciate the poetry of Tennyson?

10. "The years 1815-1818, and the years 1842-1846, are the great *foci* of literary production during the first half of the century. Seldom have there been short periods in English letters of equal fertility." Explain and discuss.

11. Give some account of the best English Poetry written during this century by women.

12. Sketch the literary production of Robert Browning, laying emphasis on the works where you consider that his powers culminate.

FOURTH PAPER.

SATURDAY, 1*st April* 1899.—2 *to* 5 *o'clock.*

[*Not more than* EIGHT *questions should be attempted.*]

1. Contrast the contributions to *Lyrical Ballads* of its two authors.

2. In what forms and applications was the Sonnet revived during the first half of this century?

3. Indicate and illustrate the range of Landor's gifts when dealing with subjects from the antique.

4. What was the state of English Satire in the day of Byron, and what place does he take in its record?

5. Characterise in their final shape the style and diction of Keats, and say what poetical reading helped to form them.

6. Write a short account, and a longer criticism, of *two* of the following: *The Curse of Kehama, Locksley Hall, Adonais, The Scholar-Gipsy, A Grammarian's Funeral.*

7. Discuss the range, preferences, and powers of Tennyson as a metrist.

8. Estimate the Poetry of Matthew Arnold in the light, and by the side, of his Criticism.

9. Quote what you can of Carlyle's description of Coleridge, and comment upon it.

10. Where did Macaulay get his style, and what are its higher excellences? Illustrate by references.

11. Set forth the central ideas of *Sartor Resartus*, and explain wherein its originality consisted at the date of its appearance.

12. Write a discriminating panegyric on the Prose of Mr. Ruskin.

FIFTH PAPER.

MONDAY, *3rd April* 1899.—9 *to* 12 *o'clock.*

(N.B.—*At least* TWO *questions should be tried out of each section of this paper.*)

A.

1. Translate, adding notes on any remarkable points in the language:—

(*a*)

Hie dygel lond
warigeaþ, wulfhleoþu, windige næssas,
frecne fengelad, ðær fyrgenstream
under næssa genipu niþer gewiteð,
flod under foldan. Nis þæt feor heonon
milgemearces, þæt se mere standeð,
ofer þæm hongiað hrimge bearwas,
wudu wyrtum fæst, wæter oferhelmaþ.
Þær mæg nihta gehwæm niðwundor seon,

fyr on flode; no þæs frod leofað
ȝumena bearna, þæt þone ȝrund wite:
ðeah þe hæðstapa hundum ȝeswenced,
heorot hornum trum holtwudu sece,
feorran ȝeflymed, ær he feorh seleð,
aldor on ofre, ær he in wille
hafelan *hydan*. Nis þæt heoru stow:
þonon yðgeblond up astigeð
won to wolcnum, þonne wind styreþ
lað ȝewidru, oð þæt lyft drysmaþ,
roderas reotað. Nu is se ræd ȝelanȝ
eft æt þe anum! Eard ȝit ne const,
frecne stowe, þær þu findan miht
fela-sinniȝne secȝ: sec ȝif þu dyrre!
(*b*) oferhyda ne ȝym,
mære cempa! Nu is þines mæȝnes blæd
ane hwile: eft sona bið,
þæt þec adl oððe ecȝ eafoþes ȝetwæfeð
oððe fyres fenȝ oððe flodes wylm
oððe ȝripe meces oððe ȝares fliht
oððe atol yldo oððe eaȝena bearhtm
forsiteð and forsworceð; semninȝa bið,
þæt ðec, dryhtȝuma, deað oferswyðeð.
Swa ic Hrinȝ-Dena hund missera
weold under wolcnum and hiȝ wiȝȝe beleac
maniȝum mæȝþa ȝeond þysne middanȝeard,
æscum and ecȝum, þæt ic me æniȝne
under swegles begonȝ ȝesacan ne tealde.
Hwæt! me þæs on eple edwenden cwom,
ȝyrn æfter ȝomene, seoþðan ȝrendel weard,
ealdȝewinna inȝenȝa min:
ic þære socne singales wæȝ
modceare micle.

2. Discuss *either* (*a*) the local and historical problems connected with *Beowulf*; *or* (*b*) the connection between the Christian and extra-Christian elements in the poem.

3. Translate, with notes on the language:—

(*a*) Her Æþelstan cinȝ, eorla drihten,
beorna beaȝȝifa *and* his broþor eac,
Eadmund æþeling ealdorlangne tir
ȝeslogan æt sake sweorda ecȝȝum
embe Brunnanburh; bordweall clufan,
heowan heaðolinda hamora lafum
eaforan Eadweardes; swa him ȝeæþele wæs
fram cneomaȝum, þæt hie æt campe oft
wið laðra ȝehwane land ealȝodan,
hord *and* hamas. Hettend crunȝon,
Scotta leode *and* scipflotan
fæȝe feollan: feld dennade
secȝa swate, siþþan sunne upp
on morȝentid, mære tunȝol,
ȝlad ofer ȝrundas ȝodes candel beorht,
eces drihtnes, oþ þæt seo æþele ȝesceaft
sah to setle.

(*b*) Nu we sculan herian heofonrices Weard,
Metodes mihte and his modgeþonc,
wera Wuldorfæder; swa he wundra ȝehwæs,
ece Dryhten, ord onstealde.
He ærest ȝesceop eorðan bearnum
heofon to hrofe, halig Scyppend;
ða middangeard, monncynnes Weard,
ece Dryhten, æfter teode
firum foldan, Frea Ælmihtig.

4. What are the poems which you think may reasonably be set down to Cynewulf, and what are their common traits?

Or,

Summarise the service of Alfred to literary culture, naming his works.

5. Translate:—

Se ælmihtiga Scippend, ða ða he englas gesceop, þa geworhte he þurh his wisdom tyn engla werod on þam forman dæge on micelre fægernisse fela þusenda on ðam frumsceafte, þæt hi on his wuldre hine wurðedon ealle lichamlease, leohte and strange, buton eallum synnum on gesælþe libbende, swa wlitiges gecindes swa we secgan ne magon, and nan yfel ðing næs on ðam englum þa git, ne nan yfel ne com þurh Godes gesceapennisse, for ðan ðe he sylf ys eallgod and ælc god cimð of him; and ða englas þa wunodon on þam wuldre mid Gode. Hwæt, þa binnan six dagum þe se soða God þa gesceafta gesceop þe he gescippan wolde, gesceawode se an engel, þe þær ænlicost wæs, hu fæger he silf wæs and hu scinende on wuldre, and cunnode his mihte, þæt he mihtig wæs gesceapen, and him wel gelicode his wurðfulniss þa: se hatte *Lucifer*, þæt ys "Leohtberend," for ðære miclan beorhtnisse his mæran hiwes.

B.

6. Translate:—

(*a*)

Nu wit hreowige magon
sorgian for þis siðe: forþon he unc self bebead,
þæt wit unc wite warian sceolden,
hearma mæstne. Nu slit me hunger ȝ þurst
bitre on breostum, þæs wit begra ær
wæron orsorge on ealle tid.
Hu sculon wit nu libban oððe on þys lande wesan,
ȝif her wind cymð westan oððe eastan,
suðan oððe norðan, ȝesweorc upfæreð,
cymeð hægles scur hefone ȝetenge,
færeð forst on ȝemanȝ, se byð fyrnum ceald,
hwilum of heofnum hate sineð,

blicð þeos beorhte sunne ȝ wit her baru standaþ
unwered wædo? nys unc wuht beforan
to scursceade ne sceattes wiht
to mete ȝemearcod: ac unc is mihtiȝ ȝod
waldend wraðmod. To hwon sculon wit weorðan nu?

(*b*) Þæs ofereode, þisses swa mæȝ!
Siteð sorȝcariȝ, sælum bidæled
on sefan sweorceð: sylfum þinceð,
þæt sy endeleas earfoða dæl.
Mæȝ þon*ne* ȝeþencan, þæt ȝeond þas woruld
witiȝ dryhten wendeþ ȝeneahhe,
eorle monegum are ȝesceawað,
wisliene blæd, sumu*m* weana dæl.
þæt ic bi me sylfum seeȝan wille,
þæt ic hwile wæs Heodeninga scop,
dryhtne dyre: me wæs Deor noma.

7. Translate:—

Þy ilcan sumera betwix hlaf mæssan ȝ middum sumera se here bræc þone friþ of Ham tune, ȝ of Ligera ceastre, ȝ þonan norþan, ȝ foron to Tofe ceastre, ȝ fuhton on þa burg ealne dæȝ, ȝ þohton þæt hie hie sceoldon abrecan; ac hie þeah awerede þæt folc þe þær binnan wæs oþ him mara fultum to com, ȝ hie forleton þa þa burg, ȝ foron aweg; ȝ þa eft swiðe raþe æfter þam hie foron eft ut mid stæl herge nihtes, ȝ comon on ungearwe men, ȝ genomon unlytel, æȝþer ȝe on mannum, ȝe on ierfe, betweox Byrne wuda ȝ Æȝles byriȝ.

8. Describe and comment on the changes in the inflection of nouns down to about 1200.

9. Give the main rules of Old English Prosody. In what other tongues was alliterative verse employed?

10. State the functions of the subjunctive in Old English.

SIXTH PAPER.

MONDAY, *3rd April* 1899.—2 *to* 5 *o'clock.*

(N.B.—*Not more than* SEVEN *or* EIGHT *questions should be attempted.*)

1. Determine the dialects of the following, giving reasons :—

(*a*) Behaldas þæt soðfæstnise iuerre gie doas before monnum þæt gie se geseno from him eaðe mæg mearde nabbas ge mið fader iurre se ðe in heafnas is. mið ðy ðonne ðu doas ælmessa nelle ðu bema singa before ðec suæ legeras gewyrcas in somnungum ⁊ in londum þæt hia se gearðad from monnum.

(*b*) He is ure fad*er*. he lenð us his eorðe tô tolie. his corn to sawe. his eorðe us werpð corn *and* westm. nîatt. *and* dierchin. his loht leôem *and* lif. his wâter drench *and* fiscynn. his fêr manifeald þenînge. his sônne. mone. sterren. rien. dâw. wind. wude. unitald fultume al *þat* we habbeð of þêse feder we habbeð. of wa*m* we alle *and* us sielfe habbeð. Mûȝe we ahct clepeien hine mod*er* wene we. ȝîe muȝe we. hwat deð si moder hire bearn. formes[t] hi hit chereð *and* blissið be þe lichte.

(*c*) The kyng slepit bot litill than,
Quhen sic a slepe fell on h*is* man,
That he my*cht* not hald vp his E,
Bot fell on slepe and routit he. . . .
In full gret hy thai raiss vp than,
And drew thair swerd*is* hastely,
And went toward the kyng in hy,
Quhen that thai saw he slepit swa,
And slepand thoucht thai vald hym sla.

(*d*) Ich yzeȝ þe ilke onspekynde an on-todelinde magesté of þe holy trinyté. begynnynge ne ende ne heþ. Ac and lyȝt þer-inne woneþ þet me ne may naȝt come to. Vram þo lyȝte byeþ y-þorsse mine eȝen and þe zyȝþe þyester.

2. Translate, with brief notes on language :—

(*a*) ȝe ne schulen senden lettres, ne underuon lettres, ne writen

buten leaue. ȝe schulen beon i-dodded four siðen iðe ȝere, uorte lihten ower heaued [oðer ȝef ȝe wulleð i-schauen hwase wule ieveset. Ah ha mot oftere weschen & kemben hire heaued]: and ase ofte i-leten blod: and oftere ȝif neod is: and hwoso mei beon þer wiðuten, ich hit mei wel i-ðolien. Hwon ȝe beoð i-leten blod, ȝe ne schulen don no þing, þeo þreo dawes, þet ou greue: auh talkeð mid ouer meidenes and mid þeaufule talen schurteð ou to-gederes. ȝe muwen don so ofte hwon ou þunkeð heuie, oðer beoð uor sume worldliche þinge sorie oðer seke.

(*b*)

Þe nihtegale i-h[e]rde this,
And hupte uppon on blowe ris,
And herre sat þan heo dude ear;
"Ule," heo seide, "beo nu wear,
Nulle ich wiþ þe plaidi na more,
For her þu mist þi rihte lore;
Þu ȝelpest þat þu art manne loþ,
And ever-euch wiht is wið þe wroþ;
And mid ȝollinge and mid i-grede,
Þu wanst wel þat þu art un-lede.
Þu seist þat gromes þe i-foð,
And heie on rodde þe an-hoð,
And þe to-twichet and to-schakeð,
And summe of þe schawles makeð
Me þunchþ þat þu for-leost þat game,
Þu ȝelpest of þire oȝe schame;
Me þunchþ þat þu me gest an honde,
Þu ȝelpest of þire oȝene schonde."

3. Give some account of the work of *Layamon*, specifying its literary value and interest.

4. Translate, with brief notes:—

(*a*) The lyf so short, the craft so long to lerne,

Thassay so hard, so sharp the conquering,
The dredful Ioy, that alwey slit so yerne,
Al this mene I by love, that my feling
Astonyeth with his wonderful worching
So sore ywis, that whan I on him thinke,
Nat wot I wel wher that I wake or winke.

(*b*) and somme. parfey,
Callen hit Watlinge Strete:
That ones was y-brent with hete,
Whan the sonnes sone, the rede,
That highte Pheton, wolde lede
Algate his fader cart, and gye.
The cart-hors gonne wel espye
That he ne coude no governaunce,
And gonne for to lepe and launce . . .

(*c*) Flee fro the prees, and dwelle with sothfastnesse,
Suffyce unto thy good, though hit be smal;
For hord hath hate, and clymbing tikelnesse,
Prees hath envye, and wele blent overal;
Savour no more than thee bihove shal;
Werk wel thy-self, that other folk canst rede;
And trouthe shal delivere, hit is no drede.

Tempest thee noght al croked to redresse,
In trust of hir that turneth as a bal:
Gret reste stant in litel besinesse.
And eek be war to sporne ageyn an al;
Strive noght, as doth the crokke with the wal.
Daunte thy-self, that dauntest otheres dede;
And trouthe shal delivere, hit is no drede.

5. Write a literary criticism *either* of *The Parlement of Foules*, or *The Hous of Fame.*

6. Give a short description of English prose during the reign of Edward III.

7. Argue any disputed questions that arise out of the language of the *Kingis Quair.*

8. Translate, with notes on language: —

(*a*) A chapellet, *with* mony fresche anewis,
Sche had vpon hir hed*e*, and *with* this hong
A mantill on hir schuldris large and long,

That furrit was *with* ermyn full quhite,
Degoutit *with* the self In spottis blake;
And quhilum In hir chier*e* thus alyte
Louring sche was, and thus some It wold slake,
And sodeynly a man*er* smylyng make,
And sche were glad; [for] at ane contenance
Sche held no*cht*, bot [was] ay In variance.

(*b*) *The* lowne illumynat ayr, & fyrth ameyn;
The sylu*er* scalyt fyschis on the greit
Ourthwort cleir stremys sprynkland for *the* heyt.
With fynnys schynand brovn as synopar.
And chyssell talys, stowrand heir & *thar*;
The new cullo*ur* aly*cht*nyng all *the* land*is*,
Forgane *thir* stanmyr*is* schane *the* beriall strandis,
Quhill *the* reflex of *the* diurnal bemys
The beyn bonk*is* kest ful of variant glemys:
And lusty Flora dyd hyr blomys spreid
Vnd*er* the feit of Phebus sulȝart steid.

9. Discuss the respective parts played in the diction of Gawin Douglas by native, by French, and by Latin elements.

10. What poetical resources are peculiar to the Scottish language, as it is found from the fourteenth to the sixteenth century?

11. (*a*) Describe the origins and trace the phases of the Book-Hands written in England before 1100.

Or,

(*b*) Define these terms:—*Uncial*, *half-uncial*, *Roman*, *italic*, *Charter-Hand*, *minuscule*.

What is the historical explanation of these press-conventions:—signature, indent, quotation-marks (Eng. and Fr.), and the dots cancelling an erasure?

Is 'Ff' a correct usage?

Or,

(*c*) Tabulate the data for determining the age of O. E. and M. E. MSS. independently of the internal (literary and philological) evidence.

(E)—MODERN LANGUAGES AND LITERATURE.

FRENCH.

FIRST PAPER (PRESCRIBED BOOKS).

MONDAY, *3rd April* 1899.—9 A.M. *to* 12 NOON.

Translate into English :—

(*a*) Les Châtiments ont des parties merveilleuses, où Hugo dépasse tout, où il recule les limites connues de la poésie éloquente, où il invente presque un nouveau genre : la satire lyrique, l'imprécation sacrée, la vraie Némésis. Il en est d'autres où ce qu'il n'avait pas assez tout a l'heure, l'émotion profonde, la vibration nerveuse, il l'a trop. L'injure, qui est une chose parfaitement belle et très artistique quand elle est à la fois sincère et maîtresse sûre de ses effets, parfois ici ne se contient plus, se prodigue, se répète, piétine furieusement sur elle-même, s'étrangle et s'étouffe, bégaie dans une grimace. Il est trop furieux ; la tension terrible des nerfs s'achève en pamoison. La pamoison n'est artistique que quand elle sait la manière de se servir d'elle-même, et se surveille en feignant de s'abandonner.

(*b*) Leur rêve de liberté ne laisse pas d'être fécond. Les suites véritables n'en ont point paru tout d'abord. Il mène peu à peu à un état social très dur, nullement patriarcal, et le contraire même, où le citoyen est d'autant plus responsable qu'il est plus libre, où l'on ne prévient pas la faute à faire, où l'on punit la faute faite, où l'homme n'a point sa tâche assignée et tracée sa voie, mais agit à ses risques et périls, doit savoir ce qu'il a à faire et est tenu d'être intelligent. Cela est pour briser beaucoup de faibles et d'étourdis, pour décupler l'énergie des énergiques.

(*c*) Il sera toujours facile, relativement, à n' importe qui, de faire connaître sa plainte et de produire sa réclamation par l'imprimé. De ce fait la souveraineté est bornée ; car la vraie souveraineté est faite surtout du silence des gouvernés.—Ce qu'on reproche à la presse, et ce dont elle se vante, c'est d'être un "troisième" ou un "quatrième pouvoir." C'est pour cela qu'il faut qu'elle soit. Ce sont des pouvoirs qu'il faut élever, ou dont il faut permettre la formation autour du Pouvoir proprement dit. Ce qu'il faut, c'est qu'il ne soit pas seul, c'est qu'il n'absorbe pas la somme totale des forces sociales. La presse est un des pouvoirs limitateurs: et celui-ci a pour lui qu'il est, sinon aux mains, du moins, un peu, à la disposition des petits. C'est leur arme; mettons que ce soit leur consolation. Il est d'hygiène sociale qu'ils en aient, ou qu'ils croient en avoir une.

(*d*) C'est précisément au temps où monarchie presque absolue, démocratie égalitaire, empire, tous renchérissant l'un sur l'autre, ont nivelé, centralisé, et *socialisé* la nation au point que voilà l'État, c'est-à-dire en pratique le gouvernement, qui est tout, qu'il convient plus que jamais qu'il y ait au moins une chose individuelle qui soit la conscience, et des associations libres de consciences qui soient les Églises.

(*e*) Paris est une arène ; involontairement, comme dans un cirque ou dans une école, on est entraîné ; tout disparait devant

l'idée du but et des rivaux ; le coureur sent leur haleine sur ses épaules ; toutes ses forces se tendent ; dans cet accès de volonté, il double son élan et contracte la fièvre qui l'use et le soutient. De là des prodiges de travail, et non seulement le travail du savant qui apprend jusqu' à s'accabler, ou de l'artiste qui invente jusqu'à s'hébéter, mais le labeur de l'homme spécial qui court, intrigue, calcule ses mots, mesure ses amitiés, entre-croise les mille filets de ses espérances, pour pêcher une clientèle, une place ou un nom.

(*f*) Si l'on répond qu'ils n'ont pas assez de lumières pour juger sainement de leur état et du nôtre, je répliquerai que l'estimation du bonheur est moins l'affaire de la raison que du sentiment. D'ailleurs cette réponse peut se rétorquer contre nous avec plus de force encore ; car il y a plus loin de nos idées à la disposition d'esprit où il faudroit être pour concevoir le goût que trouvent les sauvages à leur manière de vivre, que des idées des sauvages à celles qui peuvent leur faire concevoir la nôtre. En effet, après quelques observations, il leur est aisé de voir que tous nos travaux se dirigent sur deux seuls objets : savoir, pour soi les commodités de la vie, et la considération parmi les autres. Mais le moyen pour nous d'imaginer la sorte de plaisir qu'un sauvage prend à passer sa vie seul au milieu des bois, ou à la pêche, ou à souffler dans une mauvaise flûte, sans jamais savoir en tirer un seul ton, et sans se soucier de l'apprendre ?

(*g*) Ces distinctions une fois admises, il est si faux que dans le contrat social il y ait de la part des particuliers aucune renonciation véritable, que leur situation, par l'effet de ce contrat, se trouve réellement préférable à ce qu'elle étoit auparavant, et qu'au lieu d'une aliénation ils n'ont fait qu'un échange avantageux d'une manière d'être incertaine et précaire contre une autre meilleure et plus sûre, de l'indépendance naturelle contre la liberté, du pouvoir de nuire à autrui contre leur propre sûreté, et de leur force, que d'autres pouvoient surmonter, contre un droit que

l'union sociale rend invincible. Leur vie même, qu'ils ont dévouée à l'État, en est continuellement protégée ; et lorsqu'ils l'exposent pour sa défense, que font-ils alors que lui rendre ce qu'ils ont reçu de lui ? Que font-ils qu'ils ne fissent plus fréquemment et avec plus de danger dans l'état de nature, lorsque, livrant des combats inévitables, ils défendroient au péril de leur vie ce qui leur sert à la conserver ? Tous ont à combattre au besoin pour la patrie, il est vrai ; mais aussi nul n'a jamais à combattre pour soi. Ne gagne-t-on pas encore à courir, pour ce qui fait notre sûreté, une partie des risques qu'il faudroit courir pour nous-mêmes sitôt qu'elle nous seroit ôtée ?

(*h*) J'y rencontre parfois sur la roche hideuse
Un doux être ; quinze ans, yeux bleus, pieds nus, gardeuse
De chèvres, habitant, au fond d'un ravin noir,
Un vieux chaume croulant qui s'étoile le soir ;
Ses sœurs sont au logis et filent leur quenouille ;
Elle essuie aux roseaux ses pieds que l'étang mouille ;
Chèvres, brebis, béliers, paissent ; quand, sombre esprit,
J'apparais, le pauvre ange a peur, et me sourit ;
Et moi, je la salue, elle étant l'innocence.
Ses agneaux, dans le pré plein de fleurs qui l'encense,
Bondissent, et chacun, au soleil s'empourprant,
Laisse aux buissons, à qui la bise le reprend,
Un peu de sa toison, comme un flocon d'écume.
Je passe ; enfant, troupeau, s'effacent dans la brume ;
Le crépuscule étend sur les longs sillons gris
Ses ailes de fantôme et de chauve-souris ;
J'entends encore au loin dans la plaine ouvrière
Chanter derrière moi la douce chevrière ;
Et, là-bas, devant moi, le vieux gardien pensif
De l'écume, du flot, de l'algue, du récif,
Et des vagues sans trêve et sans fin remuées,
Le pâtre promontoire au chapeau de nuées.

S'accoude et rêve au bruit de tous les infinis,
Et, dans l'ascension des nuages bénis,
Regarde se lever la lune triomphale,
Pendant que l'ombre tremble, et que l'âpre rafale
Disperse à tous les vents avec son souffle amer
La laine des moutons sinistres de la mer.

(*i*) J'étais jadis, comme aujourd'hui,
Le passant qui regarde en bas, l'homme des songes.
Mes enfants, à travers les brumes, les mensonges,
Les lueurs des tombeaux, les spectres des chevets,
Les apparences d'ombre et de clarté, je vais
Méditant, et toujours un instinct me ramène
A connaître le fond de la souffrance humaine.
L'abîme des douleurs m'attire. D'autres sont
Les sondeurs frémissants de l'océan profond ;
Ils fouillent, vent des cieux, l'onde que tu balaies ;
Ils plongent dans les mers ; je plonge dans les plaies.
Leur gouffre est effrayant, mais pas plus que le mien.
Je descends plus bas qu'eux, ne leur enviant rien,
Sachant qu'à tout chercheur Dieu garde une largesse,
Content s'ils ont la perle et si j'ai la sagesse.

(*j*) Qu'il est difficile de proposer une chose au jugement d'un autre, sans corrompre son jugement par la manière de la lui proposer ! Si on dit : Je le trouve beau, je le trouve obscur ou autre chose semblable, on entraîne l'imagination à ce jugement, ou on l'irrite au contraire. Il vaut mieux ne rien dire ; et alors il juge selon ce qu'il est, c'est-à-dire selon ce qu'il est alors et selon que les autres circonstances dont on n'est pas auteur y auront mis. Mais au moins on n'y aura rien mis, si ce n'est que ce silence ne fasse aussi son effet, selon le tour et l'interprétation qu'il sera en humeur de lui donner ou selon qu'il le conjecturera des mouvements et air du visage ou du ton de la voix, selon qu'il sera physionomiste : tant il est difficile de ne point démonter

un jugement de son assiette naturelle, ou plutôt tant il en a peu de ferme et stable !

(*k*) On croit n'être pas tout à fait dans les vices du commun des hommes quand on se voit dans les vices de ces grands hommes, et cependant on ne prend pas garde qu'ils sont en cela du commun des hommes. On tient à eux par le bout par où ils tiennent au peuple ; car, quelque élevés qu'ils soient, si sont-ils unis aux moindres des hommes par quelque endroit. Ils ne sont pas suspendus en l'air, tout abstraits de notre société. Non, non. S'ils sont plus grands que nous, c'est qu'ils ont la tête plus élevée ; mais ils ont les pieds aussi bas que les nôtres. Ils y sont tous à même niveau, et s'appuient sur la même terre ; et, par cette extrémité, ils sont aussi abaissés que nous, que les plus petits, que les enfants, que les bêtes.

SECOND PAPER.

TUESDAY, *4th April* 1899.—2 *to* 5 P.M.

I. Translate into French :—

(*a*) To the greatness of the artist Milton joined the majesty of a pure and lofty character. His poetic style was as stately as his character, and proceeded from it. Living at a time when criticism began to purify the verse of England, and being himself well acquainted with the great classical models, his work is seldom weakened by the false conceits and the intemperance of the Elizabethan writers, and yet is as imaginative as theirs, and as various. He has not their naturalness, nor all their intensity, but he has a larger grace, a more finished art, and a sublime dignity they did not possess. All the kinds of poetry which he touched he touched with the ease of great strength, and with so much weight, that they became new in his hands. He put a new life into the masque, the sonnet, the elegy, the descriptive lyric, the song, the choral drama ; and he created

the epic in England. The lighter love poem he never wrote, and we are grateful that he kept his coarse satirical power apart from his poetry. In some points he was untrue to his descent from the Elizabethans, for he had no dramatic faculty, and he had no humour. He summed up in himself the learned influences of the English Renaissance, and handed them on to us. His taste was as severe, his verse as polished, his method and language as strict as those of the school of Dryden and Pope that grew up when he was old.—STOPFORD BROOKE.

(*b*) All encouragements to merit are misapplied which make the author too rich to continue his profession. There can be nothing more just than the old observation, that authors, like running horses, should be fed, but not fattened. If we would continue them in our service, we should reward them with a little money and a great deal of praise, still keeping their service subservient to their ambition. Not that I think a writer incapable of filling an employment with dignity: I would only insinuate, that when made a bishop or statesman, he will continue to please us as a writer no longer; as, to resume a former illustration, the running horse, when fattened, will still be fit for very useful purposes, though unqualified for a courser. No nation gives greater encouragement to learning than we do; yet, at the same time, none are so injudicious in the application. We seem to confer them with the same view that statesmen have been known to grant employments at court, rather as bribes to silence than as incentives to emulation.—OLIVER GOLDSMITH.

(*c*) The special course of history which a state runs is often determined by some original peculiarity in its situation. In the case of England, for example, such a peculiarity is its separation, decided and yet not wide, from the continent of Europe; in the case of the American Union its boundless space for expansion, and its having no rivals. The controlling peculiarity

in the situation of Prussia, on the contrary, is that it has had neighbours and rivals overwhelmingly superior, and has been separated from them by no frontier but what it could make itself. The immediate consequence of this peculiarity has been that government there assumes a much larger province than in England or America.—J. R. SEELEY.

II. (*a*) Analyse the influence of the Renaissance and of the Reformation on the French literature of the 16th century.

(*b*) What was the position of the Port-Royalists to the religious, literary, and political history of France?

(NOTE.—*Candidates may answer these questions in French or in English, but additional marks will be given for good French style.*)

THIRD PAPER.

WEDNESDAY, *5th April* 1899.—9 A.M. *to* 12 NOON.

1. Translate into English the following passages (from books not prescribed):—

(*a*) Des hêtres monstrueux soutiennent ici les pentes : aucune description ne peut donner l'idée de ces colosses rabougris, hauts de huit pieds, et que trois hommes n'embrasseraient pas. Refoulée par le vent qui rase la côte, la sève s'est accumulée pendant des siècles en rameaux courts, énormes, entrelacés et tordus ; tout bosselés de nœuds, déformés et noircis, ils s'allongent et se replient bizarrement, comme des membres boursouflés par une maladie et distendus par un effort suprême. On voit, à travers l'écorce crevée, les muscles végétaux s'enrôler autour du tronc et se froisser comme des membres de lutteurs. Ces torses trapus, demi-renversés, presque horizontaux, penchent vers la plaine ; mais leurs pieds s'enfoncent dans les rocs par de telles attaches, qu'avant de rompre cette forêt de racines on arracherait un pan de montagne. Quelques troncs, pourris par l'eau, s'ouvrent, hideusement éventrés : chaque année, les lèvres

de la plaie s'écartent; ils n'ont plus forme d'arbres; ils vivent pourtant, invincibles à l'hiver, à la pente et au temps, et poussent hardiment dans l'air nata[1] leurs jeunes rameaux blanchâtres. Le soir, lorsqu'on passe dans l'ombre près des têtes tourmentées et des troncs béants de ces vieux habitants des montagnes, si le vent froisse les branches, on croit entendre une plainte sourde, arrachée par un labeur séculaire; ces formes étranges rappellent les êtres fantastiques de l'antique mythologie scandinave. On songe aux géants emprisonnés par le destin entre des murs qui tous les jours se resserrent, les ploient, les rapetissent, et, après mille ans de tortures, les rendent à la lumière, furieux, difformes et nains.—H. TAINE.

(*b*) Les autres béliers devant les autres portes commencèrent à se mouvoir. Dans les roues creuses des tympans, on aperçut des hommes qui montaient d'échelon en échelon. Les poulies, les chapiteaux grincèrent, les rideaux de cordages s'abattirent, et des volées de pierres et des volées de flèches s'élancèrent à la fois; tous les frondeurs éparpillés couraient. Quelques-uns s'approchaient du rempart, en cachant sous leurs boucliers des pots de résine; puis ils les lançaient à tour de bras. Cette grêle de balles, de dards et de feux passait par-dessus les premiers rangs et faisait une courbe qui retombait derrière les murs. Mais, à leur sommet, de longues grues à mâter les vaisseaux se dressèrent; et il en descendit de ces pinces énormes qui se terminaient par deux demi-cercles dentelés à l'intérieur. Elles mordirent les béliers. Les soldats, se cramponnant à la poutre, tiraient en arrière. Les Carthaginois halaient pour la faire monter; et l'engagement se prolongea jusqu'au soir.

G. FLAUBERT.

(*c*) Qu'ainsi soit, le roi sage et pacifique Salomon, ne ha sceu mieulx nous représenter la perfection indicible de la sapience divine, que la comparant à l'ordonnance d'une armée en camp bien équippée et ordonnée. Par doncques n'estre adscript et en

rane mis des nostres en partie offensive, qui m'ont estimé trop imbécille et impotent; de l'aultre qui est deffensive n'estre employé aucunement, fust-ce portant hotte, cachant crotte, ou cassant motte (tout m'estoit indifférent): ai imputé à honte plus que médiocre, estre vu spectateur ocieux de tant vaillants, diserts et chevalereux personnages, qui, en vue et spectacle de toute Europe, jouent ceste insigne fable et tragique comédie: ne m'esvertuer de moi-mesme, et non y consommer ce rien mon tout, qui me restoit. Car peu de gloire me semble accroistre à ceulx, qui seulement y emploictent leurs yeulx, au demourant y espargnent leurs forces, cèlent leurs escuts, cachent leur argent, se grattent la teste avec un doigt comme landores desgoustés.—RABELAIS.

(*d*) Le bon, le sûr, le vrai, c'est l'or dans notre caisse.
L'homme est extravagant qui, lorsque tout s'affaisse,
Proteste seul debout dans une nation,
Et porte à bras tendu son indignation.
Que diable! il faut pourtant vivre de l'air des rues,
Et ne pas s'entêter aux choses disparues.
Quoi! tout meurt ici-bas, l'aigle comme le ver,
Le charançon périt sous la neige l'hiver,
Quoi! le Pont-Neuf fléchit lorsque les eaux sont grosses,
Quoi! mon coude est troué, quoi! je perce mes chausses,
Quoi! mon feutre était neuf et s'est usé depuis,
Et la vérité, maître, aurait, dans son vieux puits,
Cette prétention rare d'être éternelle!
De ne pas se mouiller quand il pleut, d'être belle
A jamais, d'être reine en n'ayant pas le sou,
Et de ne pas mourir quand on lui tord le cou!
Allons donc! Citoyens, c'est au fait qu'il faut croire!

V. HUGO.

(*e*) Le soir est tombé, les teintes de pourpre brunissent et s'effacent. Le fleuve se couche dans l'ombre molle et vague;

à peine si, de loin en loin, un reste de lueur part d'un flot oblique ; l'obscurité noie tout de sa poussière vaporeuse ; l'œil assoupi cherche en vain dans ce brouillard quelque point visible, et distingue enfin, comme une faible étoile, le phare de Cordouan.

Le lendemain soir, une fraîche brise maritime nous a ramenés à Bordeaux. L'énorme ville entasse le long du fleuve ainsi que des bastions ses maisons monumentales ; le ciel rouge est crénelé par leur bordure. Elles d'un côté, le pont de l'autre, protègent d'une double ligne le port où s'entassent les vaisseaux comme une couvée de mouettes ; ces gracieusse carènes, ces mâts effilés, ces voiles gonflées ou flottantes, entrelacent le labyrinthe de leurs mouvements et de leurs formes sur la magnifique pourpre du couchant. Le soleil s'enfonce au milieu du fleuve qu'il embrase ; les agrès noirs, les coques rondes, font saillie dans son incendie, et ressemblent à des bijoux de jais montés en or.—H. TAINE.

2. Answer the following questions :—

(*a*) What is the relation of Montaigne's *Essais* to Pascal's *Pensées*? Wherein lies the essential difference between the scepticism of the one and the scepticism of the other?

(*b*) Contrast the treatment of history by Guizot and by Michelet.

(*c*) State and explain the main difference between the classical tragedy and the romantic drama.

(*d*) What is the educational value of a comparative study of French and English homonyms? Illustrate and support your argument by an analysis of the following :—(1) office ; (2) caractère (Eng. character) ; (3) rapport (Eng. report) ; (4) cours (Eng. course) ; (5) terme (Eng. term) ; (6) gaîté (Eng. gaiety) ; (7) partisan ; (8) politicien ; (9) sentence ; (10) loyal ; (11) part ; (12) issue.

(*e*) Analyse the philological laws and the historical circum-

stances which have regulated the differentiation between the French vocabulary and the English vocabulary of Franco-Norman origin.

As an *alternative* to (*e*) candidates may take the following:-

(*f*) Read the following passage from Henri Estienne, comment upon it, and support your argument by illustrations taken from the French vocabulary :—

Messieurs les courtisans se sont oubliez jusque-là d'emprunter d'Italie leurs termes de guerre sans avoir esgard à la conséquence que portoit un tel emprunt ; car d'ici à peu d'ans qui sera celuy qui ne pensera que la France ait appris l'art de la guerre en l'eschole de l'Italie, quand il verra qu'elle usera des termes italiens? Ne plus ne moins qu'en voyant les termes grecs et tous les arts libéraulx estre gardez ès autres langues, nous jugeons, et à bon droict, que la Grèce a été l'eschole de toutes les sciences.

FOURTH PAPER.

THURSDAY, *6th April* 1899. 9 *to* 10.30 A.M.

Write an Essay in French on one or other of the following subjects :—

Why did the Reformation of the 16th century fail in France? What are the results of that failure?

What are the essential differences between French and English culture?

The interchange of literary influences between France and the other countries of Europe.

GERMAN.

FIRST PAPER.

MONDAY, *3rd April* 1899.—2 *to* 5 P.M.

I. Translate into English (down to ſchreibt und bezaubert) :—

Erkennet ein Dichter, daß die Seelenkräfte, die theils ſein Gegen-

ſtand und ſeine Dichtungsart fodert, und die bei ihm herrſchend ſind, vorſtellende, erkennende Kräfte ſind: ſo muß er ſeinen Gegenſtand und den Inhalt ſeines Gedichtes in Gedanken ſo überlegen, ſo deutlich und klar faſſen, wenden und ordnen, daß ihm gleichſam alle Lettern ſchon in die Seele gegraben ſind, und er gibt an ſeinem Gedichte nur den ganzen redlichen Abdruck. Fodert ſein Gedicht aber Ausſtrömung der Leidenſchaft und der Empfindung, oder iſt in ſeiner Seele dieſe Klaſſe von Kräften die würkſamſte, die geläufigſte Triebfeder, ohne die er nicht arbeiten kann: ſo überläßt er ſich dem Feuer der glücklichen Stunde und ſchreibt und bezaubert. Im erſten Falle haben . . . Haller, Kleiſt und andere gedichtet . . . Leßing iſt, glaub' ich, in ſeinen ſpäteren Stükken der Dichtkunſt auch in dieſer Zahl — alle ſo lebendig, und in der Seele ganz vollendete Stükke nehmen ſich, wenn nicht durch ein Schnelles, ſo durch ein Tiefes und Beſtändiges des Eindrucks aus . . . Von der zweiten Art muß z. E. Klopſtock in den ausſtrömendſten Stellen ſeiner Gedichte ſein: Gleim, deſſen Gedichte ſo viel Sichtbares vom Erſten Wurf haben . . . Rammler, glaube ich, ſucht beyde Arten zu verbinden, ob freylich gleich die Erſte, die Ausgedachte, bey ihm ungleich ſichtbarer iſt. Wieland ſucht ſie zu verbinden, ob er gleich immer doch mehr aus dem Fach der Weltkenntnis ſeines Herzens zu ſchreiben ſcheint, Gerſtenberg zu verbinden — und überhaupt verbindet ſie in gewiſſem Maaſſe jeder glückliche Kopf.

Comment upon the whole passage, indicating especially—

(*a*) The relation of Herder's division of poets to the history of Literature and of Criticism in the eighteenth century;

(*b*) to Herder's distinction between "Kunstpoesie" and "Volkspoesie";

(*c*) to the contrasting influences of French and of English Literature on German Letters;

(*d*) to Schiller's distinction between naïve and sentimental poesy;

(*e*) to the difference between Classicism and Romanticism.

(*f*) Characterise briefly the works of Haller, Kleist, Lessing, Klopstock, Gleim, Rammler, Wieland, Gerstenberg, which Herder may be supposed to be referring to here, and

(*g*) say how you would classify Goethe and Schiller in this connection.

II. Read, but do not translate:—

Nein, kein Spaziergang mit Menschen ist so schön, als der eines Kindes mit den Eltern. Wir gingen durch hohe grüne Kornfelder, worin ich die Schwester hinter mir nachführte in der engen Wasserfurche. Alle Wiesen brannten im gelben Frühlingsfeuer. Am Flusse lasen wir ausgespülte Muscheln wegen ihres Schillerglanzes auf. Das Flößholz schoß in Herden hinab in ferne Städte und Stuben, und ich hätte mich gerne auf ein Scheit gestellt und wäre mitgeschifft. Viele Schafherden waren schon nackt geschoren und legten sich mir näher ans Herz, gleichsam ohne die Scheidewand der Wolle. Die Sonne zog Wasser in langen wolkigen Strahlen; aber mir kam es vor, als sei die Erde mit Glanzbändern an die Sonne gehangen und wiege sich an ihr. Eine Wolke, die mehr Glanz als Wasser hatte, regnete bloß neben, nicht auf uns; ich begriff damals gar nicht, als ich die Grenzen der nassen und trockenen Blumen sah, wie ein Regen nicht allezeit über die ganze Erde falle. Die Bäume neigten sich gegeneinander, als die Wolke tropfend darüber weg wehte, wie die Menschen am Abendmahlsaltar. Wir gingen ins Gartenhaus, das innen und außen nur weiß ist; aber warum glänzt dieser kleine Name über alle stolz gedeckten Prachtgebäude herüber und blinkt in seinem Abendrot gegen fremdes Morgenrot? Alle Fenster und Thüren waren aufgemacht — Sonne und Mond sahen zugleich hinein — die rotweißen Apfelknospen wurden von ihren starren struppigen Ästen hineingehalten und zuweilen eine schneeweiße Apfelblüte mit (o Vult, ich gebe den Apfel für die Apfelblüte gerne).

(*a*) In what respects is this passage characteristic of Jean

Paul's genius, of his idiosyncrasies, his conception and use of nature, his style?

(*b*) Who is Vult? who is the other hero? How are they contrasted? Explain what is meant by the statement that Jean Paul's composition is based on the principle of parenthesis. Can you account for his character as a writer from the manner of his education and his methods of working?

(*c*) What was it that attracted Carlyle to the writings of Jean Paul?

III. Translate into English:—

Das Waltharilied ist ein ehrwürdig Denkmal deutschen Geistes, die erste grosse Dichtung aus dem Kreis heimischer Heldensage, die trotz verzehrendem Roste der Zeit unversehrt der Nachwelt erhalten ward. Freilich sind andere Töne darin angeschlagen, als in den goldverbrämten Büchlein, die der epigonische Poet ausheckt, — der Geist grosser Heldenzeit weht darin, wild und fast schaurig, wie Rauschen des Sturms im Eichwald, es klingt und sprüht von Schwerteshieb und zerspelltem Helm und Schildrand ein Erkleckliches, und ist von minniglichem Flötenton so wenig zu verspüren, als von angegeistetem Schwatzen über Gott und die Welt und sonst noch Einiges: riesenhafter Kampf und riesenhafter Spass, altes Reckenthum in seiner schlichtfürchterlichen Art, ehrliche, fromme, schweigende Liebe und ächter, dreinschlagender Hass, das waren Ekkehards Bausteine . . . Und wen die Herbigkeit alter, oft schier heidnischer Anschauung unlieblich anmuthen möchte, gleich einem rauhen Luftzug an den Dünen des Meers, draus der frackumhüllte Mensch Erkältung schöpft und ein Hüstlein, der möge bedenken, dass Einer das Lied sang, der selber in der Hunnenschlacht gefochten, und dass er's sang, die Locken umsaust vom Winde, der über die Schneefelder des Säntis gestrichen, viel hundert Klafter über den Niederungen

des Thales, die Wolfshaut zum Mantel, den Felsblock der Höhle zum Schreibtisch, die Bärin zum Zuhörer.

Comment briefly on the principal points of the above appreciation of the "Waltharilied," and say what was Scheffel's artistic motive in introducing the poem into his *Ekkehard*.

What epoch of German History and which features of its "Kulturgeschichte" does Scheffel illustrate in his *Ekkehard*?

IV. Translate:—

Verächtlich iſt des Kleinlichen Eitelkeit,
Nicht aber des Edlen Stolz: Erhabenes iſt ſchwer zu ertragen,
Die Ratte jedoch kreucht in jedweden Spalt.
Ich lobe beſcheidenen Sinn in des täglichen Thuns Vorgängen,
Wo Gleiche zu Gleichen geſellt;
Doch kühn wie ein Adler fleugt Begeiſtrung.

Ich ſchelte nicht das kindliche Lied, entſproßt
Harmloſem Gemüt, und ſelbſt das kindiſche ſei vielen erfreulich:
Gewaltiges nur werde drum nicht verkannt!
Es möge behaglichen Ton dem gefälligen Ohr herſtammeln,
Wen immer Geringes ergötzt:
Mir winke jedoch der höhere Siegspreis!

Erwachſ'nen biet' ich würdigen Hochgeſang:
Mich wähle der Held zum Zeitgenoſſen am Vorabend des Kampfes;
Es höre der Staatsmann des Lieds Warnungen,
Sobald es die Toten erweckt und erblichener Zeit Großthaten
Tiefſinnig und feierlich wälzt;
Mir wende der Denker ſeinen Blick zu!

Es ſchöpfe, Freund, der bildende Künſtler auch
Anſchauungen aus dem lebendigen Springquell der Geſänge:
Er lerne die Anmut hervorlocken trotz
Des ſprödeſten Stoffs, das Bedeutende ſtets von dem Wuſt ab-
ſcheidend;

Auch lern' er im Geiſte verſteh'n,
Wie Fülle ſich paart der höchſten Einfalt.

To what extent do the above stanzas illustrate Platen's character as a man and as a poet?

V. Read the following passages and answer the question appended:—

So manche Jahre wohn' ich hier unter euch verborgen, und immer bin ich wie im erſten fremd, denn mein Verlangen ſteht hinüber nach dem ſchönen Lande der Griechen, und immer möcht' ich über's Meer hinüber, das Schickſal meiner Vielgeliebten theilen. Weh dem! der fern von Eltern und Geſchwiſtern ein einſam Leben führt; ihn läßt der Gram des ſchönſten Glückes nicht genießen; ihm ſchwärmen abwärts immer die Gedanken nach ſeines Vaters Wohnung, an jene Stellen, wo die goldne Sonne zum erſtenmal den Himmel vor ihm aufſchloß, wo die Spiele der Mitgebornen die ſanften, liebſten Erdenbande knüpften.

So manches Jahr bewahrt mich hier verborgen
Ein hoher Wille, dem ich mich ergebe;
Doch immer bin ich wie im erſten fremd
Denn ach! mich trennt das Meer von den Geliebten,
Und an dem Ufer ſteh' ich lange Tage,
Das Land der Griechen mit der Seele ſuchend;
Und gegen meine Seufzer bringt die Welle
Nur dumpfe Töne brauſend mir herüber.
Weh dem, der fern von Eltern und Geſchwiſtern
Ein einſam Leben führt! Ihm zehrt der Gram
Das nächſte Glück vor ſeinen Lippen weg;
Ihm ſchwärmen abwärts immer die Gedenken
Nach ſeines Vaters Hallen, wo die Sonne
Zuerſt den Himmel vor ihm aufſchloß, wo
Sich Mitgeborne ſpielend feſt und feſter
Mit ſanften Banden aneinander knüpften.

Comment briefly upon the above passages from the first prose

version and the final metrical version of "Iphigenie," pointing out and explaining the differences which indicate a growth of Goethe's art.

VI. Answer briefly *one* of the following questions:—

(*a*) How does Schiller distinguish between "Anmut" and "Würde"? What is the relation of Schiller's essay to Kant's Moral Philosophy? What does Schiller understand by the term "schöne Seele"?

(*b*) How are the sagas of the "Heldenbuch" connected with the stories or characters of the great national epics: the "Nibelungen," the "Hildebrantslied," the "Waltharilied," "Gudrun"?

VII. Translate into English *either* (*a*) or (*b*), and answer the questions appended to *both*:—

(*a*) Ze lezest chad ter hellogot, uuanda in erbarmita iz ouch: Uuaz mugen uuir nû mêr? ergebén demo man sin uuib ze mieto umbe sinen sancleih, aber in dien uuorton unde mit tero gedingûn unde mit tero scaffungo, taz er hinnân farendo sih ne hinder sehe. Uuer mag uuineskefte scaffunga getuon? Selbiu diu uuineskaft scaffôt iro selbûn. Ah ze sêre, so er sia nâh ze liehte brâhta, dar uuartêta er iro, dâr ferlôs er sia, dâr sturzte er selbo.

Explain the difference in the vowels in mag—mugen; uuineskaft—uuineskefte.

What does the above passage refer to?

(*b*) Dâ wizzen al ein anderen unvertougenlicho die himilisgen erben, die die burg bûent, in durhskônen tugindan, an aller missetâte pflega. Dâ richisôt diu minna mit aller miltfrowida und aller tugidône zala mit stâten vrasmunde. Dâ verselet diu wârheit daz alte gedinge. Dâ nimet diu gelouba ende aller ir geheizze. Dâne habet resti der engilo vrôsank, daz suozze gotes wunneloh, diu geistliche mendi, der wundertiuro bimentstank aller gotes wolôno.

What does this passage describe?

Give the etymology and etymological cognates of:—*minna, tugind, gelouba, gedinge, angil.*

VIII. Translate into English:—

Lâts iuch gezemen.—ir sult niemer iuch verschemen.—verschamter lîp, waz touc der mêr?—der wonet in der mûze rêr,—dâ im werdekeit entrîset unde in gein der helle wiset. ir tragt geschickede unde schîn,—ir muget wol volkes hêrre sin.—ist hôch und hœht sich iuwer art,—lât iwern willen des bewart,—iuch soll erbarmen nôtec her:—gein des kumber sit ze wer—mit milte und mit güete:—vlizet iuch diemüete.—der kumberhafte werde man—wol mit schame ringen kan—(deist ein unsüeze arebeit):—dem sult ir helfe sin bereit.—swenne ir dem tuot kumbers buoz,—sô nâhet iu der gotes gruoz.—im ist noch wirs dan den die gênt—nâch prôte aldâ diu venster stênt.

Give 1st person sing. pres. indic. of:—*lât, sult, touc, muget, tuot, gênt, stênt.*

SECOND PAPER.

TUESDAY, *4th April* 1899.—9 A.M. *to* 12 NOON.

I. Translate into idiomatic German:—

(*a*) Wine, wax-lights, comestibles, rouge, crinoline-petticoats, diamonds, wigs, Louis-quatorze gimcracks, and old china, park hacks, and splendid high-stepping carriage horses—all the delights of life, I say, would go to the deuce, if people did but act upon their silly principles, and avoid those whom they dislike and abuse.—THACKERAY.

(*b*) Up started the whole forest in violet fire. He saw the country at the foot of the hills to the bounding Rhine gleam, quiver, extinguished. Then there were pauses, and the lightning seemed as the eye of heaven, and the thunder as the tongue of heaven, each alternately addressing him; filling him with awful rapture. Alone there—sole human creature

among the grandeurs and mysteries of storm—he felt the representative of his kind, and his spirit rose, and marched, and exulted, let it be glory, let it be ruin! Lower down the lightened abysses of air rolled the wrathful crash: then white thrusts of light were darted from the sky, and great curving ferns, seen steadfastly in pallor a second, were supernaturally agitated, and vanished. Then a shrill song roused in the leaves and the herbage. Prolonged and louder it sounded, as deeper and heavier the deluge pressed. A mighty force of water satisfied the desire of the earth.—MEREDITH.

(*c*) There, uninhabited for many and many a year, the mansion had been left in unregarded havoc of ruin; the garden-gate still swung loose to its latch; the garden, blighted utterly into a field of ashes, not even a weed taking root there; the roof torn into shapeless rents; the shutters hanging about the windows in rags of rotten wood; before its gate, the stream which had gladdened it now soaking slowly by, black as ebony, and thick with curdling scum: the bank above it trodden into unctuous, sooty slime: for in front of it, between it and the old hills, the furnaces of the city foaming forth perpetual plague of sulphurous darkness: the volumes of their storm clouds coiling low over a waste of grainless fields, fenced from each other, not by hedges, but by slabs of square stone, like grave-stones, riveted together with iron.—RUSKIN.

(*d*) To sleep: perchance to dream: ay, there 's the rub: —For in that sleep of death what dreams may come,—When we have shuffled off this mortal coil, —Must give us pause: there 's the respect—That makes calamity of so long life; For who would bear the whips and scorns of time, —The oppressor's wrong, the proud man's contumely, —The pangs of despised love, the law's delay, —The insolence of office and the spurns—That patient merit of the unworthy takes, —When he himself might his quietus make—With a bare bodkin? . . . Thus conscience

does make cowards of us all;—And thus the native-hue of resolution—Is sicklied o'er with the pale cast of thought,—And enterprises of great pitch and moment—With this regard their currents turn away,—And lose the name of action.

SHAKESPEARE.

II. Read the following passages and answer the questions appended thereto:—

(*a*) Daz ich nu weiz, wist' ich ez dô,—benamen, so wære ez iuwer tôt"—"war umbe?" sprach er, "schœne Îsôt,—waz wirret iu? waz wizzet ir?"—"swaz ich weiz, daz wirret mir; swaz ich sihe, daz tuot mir wê:—mich müejet himel unde sê;—lip unde leben daz swæret mich" -si stiurte unde leinde sich mit ir ellebogen an in:—daz was der belde ein begin.—ir spiegelliehten ougen—diu volleten tougen—ir begunde ir herze quellen,—ir süezer munt ûf swellen,—ir houbet daz wac allez nider.—ir friunt begunde ouch sî dar wider—mit armen umbevahen,—ze verre noch ze nâhen—niwan in gastes wîse.—er sprach suoz' unde lîse:—"ei, schœne süeze, saget mir:—was wirret iu, waz klaget ir?"—Der Minnen vederspil Îsôt,—"lameir," sprach sî, "daz ist mîn nôt,—lameir daz swæret mir den muot,—lameir ist daz mir leide tuot."

How do you explain the difference between "suoze" "süeze"? give other instances of the same change. How did "ich sehe" develop out of M.H.G. "ich sihe"? What is peculiar in the form "begunde"?

(*b*) Eins tages gedâhez an die stat—daz si der junge künec bat—nâch sîme dienste minne.—si verfluochte im sîne sinne,—unde vrâgte in wes er wânde,—war umbe er sich sinnes ânde.—Si sprach hin zim "wært ir sô alt,—daz under schilde wære bezalt—in werdeclichen stunden,—mit helm ûf houbet gebunden—gein herteclichen vâren,—iwer tage in fünf jâren,—daz ir den pris dâ het genomen,—und wært ir danne wider komen—ze

mim gebôte gewesen dâ, spræche ich denne alrêste jâ,—des iwer wille gerte, alze fruo ich iuch gewerte.

Say to what extent the forms *des*, *wes*, *iwer*, *fruo*, *gein*, *vâre*, have left traces in modern German.

Point out what is characteristic in the above passages of the tendency and style of Gottfried's and Wolfram's poetry respectively.

III. Answer *three* of the following questions, of which (*a*) and (*b*) must be two:—

(*a*) Illustrate from your knowledge of German History the following remark of W. H. Riehl:—

Keine andere europäische Nation hat einen so häufigen Frontwechsel durchgemacht, keine solch eine gründliche Verschiebung ihrer Kulturachse vollzogen, keine so oft ihren politischen Schwerpunkt verlegt wie die deutsche. Wechselnd tritt in der deutschen Geschichte ein Stamm nach dem andern, ein Gau nach dem andern, wechselnd tritt Nord und Süd in den Vordergrund. Wir ergänzten uns in diesem Wechsel, der doch niemals zur Alleinherrschaft eines Teiles über das Ganze führte. In der Fülle unseres individuellen Volkslebens ruht unsere Stärke, sofern nur der Gemeingeist wachsend lebendig bleibt . . . in diesen Thatsachen ruht das Geheimnis der Unverwüstlichkeit Deutschlands, die Zauberkraft seiner Verjüngung. —Und wir haben uns verjüngt!

(*b*) What peculiarities of the German language make it suitable for the purposes of translating the poetry of other nations? How does German compare with French or English in this respect?

(*c*) Characterise briefly the periods in which German civilisation and literature have been influenced by the Ancients.

(*d*) Which tendencies of the "Sturm und Drang" are revived and intensified in the Romantic school in Germany?

THIRD PAPER.

WEDNESDAY, *5th April* 1899.—2 *to* 5 P.M.

1. Translate into idiomatic English :—

(*a*) Der erſte Blick Corneliens war wieder auf die Erde — dieſe aber war nicht mehr das wohlbekannte Vaterhaus: in einem fremden goldenen Rauche lodernd, taumelte ſie gleichſam zurück, an ihrer äußerſten Stirn das Mittelmeer, wie ein ſchmales gleißendes Goldband tragend, überſchwimmend in unbekannte phantaſtiſche Maſſen. Erſchrocken wandte die Jungfrau ihr Auge zurück, als hätte ſie ein Ungeheuer erblickt — aber auch um das Schiff herum wallten weiße, dünne, ſich dehnende und regende Leichentücher — von der Erde geſehen — Silberſchäfchen des Himmels. — Zu dieſem Himmel floh nun ihr Blick — aber ſiehe, er war gar nicht mehr da: das ganze Himmelsgewölbe, die ſchöne blaue Glocke unſerer Erde, war ein ganz ſchwarzer Abgrund geworden, ohne Maß und Grenze in die Tiefe gehend, — jenes Labſal, das wir unten gedankenlos genießen, war hier oben völlig verſchwunden, die Fülle und Flut des Lichtes auf der ſchönen Erde. Wie zum Hohne wurden alle Sterne ſichtbar — winzige ohnmächtige Goldpunkte, verloren durch die Oede zerſtreut — und endlich die Sonne, ein drohendes Geſtirn, ohne Wärme, ohne Strahlen, eine ſcharfgeſchnittene Scheibe aus wallendem, blähendem, weißgeſchmolzenem Metalle: ſo glotzte ſie mit vernichtendem Glanze aus dem Schlunde — und doch nicht einen Hauch des Lichtes feſthaltend in dieſen weſenloſen Räumen; nur auf dem Ballon und dem Schiffe ſtarrte ein grelles Licht, die Maſchine geſpenſtig von der umgebenden Nacht abhebend und die Geſichter totenartig zeichnend, wie in einer Laterna magica.—STIFTER.

(*b*) Burckhardts berühmte Darſtellung hat uns das Geheimnis dieſes ſchrankenloſen Individualismus verſtehen gelehrt; wie man wieder auf den Menſchen als Sinnenweſen zurückkam, die Rechte der Kreatur und aller irdiſchen Freuden leidenſchaftlich betonte, der demütigen Askeſe und Selbſtverleugnung den

Stolz, den Ehrgeiz, den Weltgenuss, den Drang zu erobern und zu beherrschen, die Ruhmbegier, die sinnliche Liebe, die allseitige Ausbildung des Körpers und Geistes, der physischen, der intellectuellen und der Willensmächte, das leidenschaftliche Trachten nach allen Gütern dieser Erde als gesunde Bethätigung echten Menschengefühls mit vollem Bewusstsein entgegensetzte, und wie man ferner unter dem aufregenden Eindruck der Orientfahrten und der grossen Entdeckungsreisen im Weltmeer auch die Natur mit tieferen Augen betrachten lernte, ihr als Künstler wie als Forscher ganz neue Offenbarungen abgewann, und die Herrschaftsgebiete des Menschengeistes immer weiter sich ausdehnen sah ins Unendliche. Die Begriffe der Selbsthilfe und der Selbstverantwortung, der Drang emporzukommen und sich aller Kräfte seiner Existenz ausübend bewusst zu werden, . . . überall kam diese erstarkte Macht des persönlichen Lebens, des Selbstseinwollens zur Geltung und rüttelte an den alten Bildungs- und Daseinsordnungen: . . . es galt, Raum zu gewinnen, Schranken zu durchbrechen, Freiheit zu erobern, es galt umzustürzen und neu zu bauen. Immer neu ist unser Staunen über die Kolossalmenschen, die dieser revolutionäre Geist vor allem in der italienischen Renaissance hervorgebracht, Menschen, in denen sich der Enthusiasmus für alles Erhabene und Schöne, der höchste Bildungsdrang, die vollendete Ritterlichkeit, die begeisterte Huldigung der Frauen, die entschlossenste Opferwilligkeit, und das hochherzigste Eintreten für die edelsten Interessen mit einer frevelhaften Ruchlosigkeit und hinterlistigen Tücke, mit einer kalten Verachtung aller objectiven sittlichen Mächte verbinden konnte; und doch mögen wir uns dem Zauber dieser unheimlichen Genialitäten nicht entziehen, die auch auf dem Gipfel des Frevels die elementaren Tiefen der inkommensurabeln Menschennatur empfinden lassen und einen Jeden erschütternd gemahnen an den Dämon in der eigenen Brust. BERGER.

Which of the characteristics of the Rennaisance mentioned in the above passage have contributed to produce the Faust saga? In what sense can the period of "Sturm und Drang" be called a revival of the tendencies of the Renaissance?

(*c*) Vaterland, ſei mir gegrüßt! Der hehren Scenen ſo manche
Steigt in der großen Natur ſchrecklicher Schönheit empor;
Ragende Felſenzinken mit wolkenumlagerter Spitze,
Welche kein Jäger erklomm, welche kein Adler erflog;
Blendender Gletſcher ſtarre, kryſtallene Wogen, mit ſcharfen,
Eiſigen Klippen bepflanzt, wo, durch unnebelte Luft,
Schneidenden Zuges, die Gähe hinunter, die wälzende Lawine
Rollet den froſtigen Tod, wo im Wirbel des Nords
Und im krachenden Donner der tiefaufberſtenden Spalten
Kaltes Entſetzen und Grau'n lauſchende Wandrer ergreift;
Dort die Hirtenthale, von ſilbernen Bächlein bewäſſert,
Und vom Schellengeläut weidender Kühe durchtönt;
Äcker, wo ſtachlichte Gerſte bei bebendem Roggen dahinwogt,
Lichter Hafer begrenzt bräunliches Furchengeſtreif.
Welch ein frohes Gemiſch! Es ſprießen die herrlichen Bilder
Zahllos, wie Blumen im Lenz, vor der Erinnerung Hauch.
Doch mich weckt das Donnergetöſe der ſpritzenden Räder,
Und des raſchen Geſpanns dumpf erklappernder Huf,
Der geſchwungenen Geißel Knall, des treibenden Kärrners
Drohender Fluch und des Markts heiſeres Krämergeſchrei.
Ha! mich umſchlingen weit Lutetias kreuzende Gaſſen;
Mancher Zauberpalaſt, voll des Goldes und Grams,
Hebt die türmenden Giebel, von ſtockenden Dünſten umbrütet,
Welche mit ſtumpferem Strahl mühſam die Sonne durchwühlt.

V. SALIS.

2. Translate *either* of the two following passages, and answer the questions appended to *both*:—

A. mit gêru scal man geba infâhan,
ort widar orte. dû bist dir, altêr hûn,

ummet spâhêr, spenis mih
mit dînêm wortun, wili mih dînu speru werpan.
pist alsô gialtêt man, sô dû êwîn inwit fuortôs
dat sagêtun mi sêolîdante
westar ubar wentilsêo, dat inan wîc furnam:
tôt ist Hiltibrant Heribrantes suno.

(*a*) From what poem is this passage taken? Give the argument of it, and indicate its characteristic features. (*b*) Give two modern German words derived from O.H.G. *spanan*. (*c*) Give two other compounds formed like *wentilsêo*. (*d*) Give four O.H.G. words for Kampf. (*e*) Explain the formation of *sêolîdante*. (*f*) Give 1 sg. ind. pres.; 1 sg. ind. praet.; 1 plur. ind. praet.; part. praet. of *werpan*. (*g*) How do you explain the vowel changes in the forms *nimu*, *nimit*, *nemames*, *uam*, *uâmum*, *giuoman*? Which are the corresponding Middle High German forms, and how do you account for the changes in their Modern German equivalents?

B. Uuerod blîdhode

uuârum thar an luston liudi atsamne,
gumon gladmôdie. Gengun ambahtman,
skenkeon mid scalun, drôgun skîrianne uuin
mid oreun endi mid alofatun, was thar erlo drôm
fagar an flettea, thô thar fole undar im
an them benkeon sô bezt blidsea afhobun,
uuarun thar an uunneun.

(*a*) What is the dialect of this passage? Give your reasons. (*b*) What is its metre? (*c*) What does the passage describe? (*d*) Give English or Mod. German etymological cognates or equivalents of the stems contained in: *gumon*, *gladmôdie*, *ambahtman*, *alofatun*, *fagar*, *uuerod*.

3. Read the following and answer the questions appended: —

Jene Lehre, Natur und Kultur zu vermählen, auf der Spitze der Erkenntnis zu dem goldenen Glücke der Menschheit zurückzukehren,

das ſie vor aller geteilten Erkenntnis beſaß, dieſe Vorſchrift, die jeder große Mann des Jahrhunderts in Deutſchland ſich und dem Zeitalter gab, dies Prinzip, zwiſchen deſſen ſtreitigen Forderungen Herder und Wieland noch ſchaukelten, Jean Paul ſich in Extreme teilte, deſſen widerſageriſche Elemente Goethe im Fauſt zur Anſchauung brachte, erſcheint bei Schiller auf der Höhe klarer Überzeugung und beſonnener Einſicht. Alle ſeine Schriften durchdrang von ſeiner philoſophiſchen Zeit an die Tendenz nach richtiger Begrenzung der beiden Grundtriebe der menſchlichen Natur, des ſinnlichen und geiſtigen, nach ihrer Gleichſtellung, nach der Wiedererlangung der totalen Menſchennatur.

Comment *briefly* upon the above passage, indicating especially: (*a*) When and how „Natur" and „Kultur" were supposed first to have been divorced in the history of civilisation; (*b*) Which periods the „Spitze der Erkenntnis" and the „goldenes Glück vor aller geteilten Erkenntnis" refer to; (*c*) Who were the great men of Germany referred to; and (*d*) in what respect did their views differ from those of the great French writer on which they were based; (*e*) To what extent were Herder and Wieland undecided, and (*f*) Jean Paul divided into extremes; (*g*) Which features of Goethe's *Faust* does the author here refer to; (*h*) In which of Goethe's works is the same problem treated; (*i*) How far may that problem be said to dominate the history of civilisation in the 18th century in all its departments; (*k*) Which is Schiller's „philoſophiſche Zeit"; (*l*) What is the title of his first essay dealing with the subject; (*m*) In which of his philosophical writings has he discussed it; and (*n*) from which points of view; (*o*) Which of his dramas deal with the same problem, and in what way; (*p*) In which of his poems does he deal with it; (*q*) What German writers have insisted on the necessity of developing the „Totalität der Menſchennatur."

FOURTH PAPER.

THURSDAY, *6th April* 1899.—10.30 A.M. *to* 12 NOON.

ESSAY.

„Man glaube nicht, daß dieſes Stück (die Iphigenie), weil es ſeinen Gegenſtand aus dem dramatiſchen Kreiſe der Alten nimmt, weil es dem Inhalte nach ſo ganz von den Bedingungen unſeres Lebens abzuliegen ſcheint, weil es den Bau und den Ton der alten Stücke trägt, darum aus der Reihe der übrigen Werke Goethes herausträte, die mit ſichtbaren Fäden an ſeine eigene Exiſtenz geknüpft ſind, wie er ſelber auf Weg und Steg mit pragmatiſcher Gewiſſenhaftigkeit nachweiſt. Es iſt kein Spiel eitler Worte, wenn wir ſagen, daß dieſes reine, edle Dichtungswerk voll Milde und Frieden, als ein Symbol ſteht, in dem der zur Klarheit und Ruhe gekommene Dichter, der ſeine titaniſche Zeit und Qual eben abgelegt hatte, deſſen dichteriſcher Eifer ſich ſonſt um den gefeſſelten Prometheus drängte, der ſelbſt ſeinen Freunden Prometheus hieß, und ſich ſelber das Los des Tantalus bisher zugeſchrieben hatte, jetzt ſeine eigene Verſöhnung in der jenes Heroenhauſes beſang, welchem, gleich jener himmelſtürmenden Jugend, ſtatt des Rates, der Mäßigung, der Weisheit nur wütende Begierde eigen war."

GERVINUS.

Man begründe und erläutere im Einzelnen die obigen Bemerkungen mit beſonderer Berückſichtigung der hervorgehobenen Punkte.

(F)—HISTORY.

CONSTITUTIONAL HISTORY OF ENGLAND (1066-1450).

FIRST PAPER.

THURSDAY, *6th April* 1899.—9 A.M. *to* 12 NOON.

(*No.* 12 *and* FIVE *other questions only to be answered.*)

1. Describe briefly the English Constitution as recast by William I.

2. Explain and discuss the questions at issue (1) between Anselm and Kings William II. and Henry I., and (2) between Becket and Henry II.

3. Quote and discuss those clauses of Magna Carta which are of vital constitutional importance.

4. Give the substance of the Provisions of Oxford, and state the constitutional principles involved.

5. On what grounds has Edward I. been styled the "English Justinian"?

6. Describe briefly the Parliament of 1295, and the nature of the writs summoning it.

7. "Boniface VIII. claimed Scotland as a papal fief." Describe and discuss the sequel.

8. Explain the importance of the revocation of the Ordinances, in 1322, and of the declaration that the affairs of king, realm, and people shall be treated of in Parliament, "as heretofore accustomed."

9. Sketch the history of resistance to papal encroachment from 1351 to 1393.

10. Describe the English Constitution as remodelled by Henry IV., and compare it with that of 1689.

11. Review the chief causes of the wars of the Roses.

12. Translate and explain *three* of—

(*a*) Eac he lett gewritan hu mycel landes his arcebiscopas

hæfdon, and his leodbiscopas and his abbotas and his eorlas, and hwæt oththe hu mycel ælc mann hæfde on land oththe on orfe, and hu mycel feos hit wære wurth. (1085.) He wæs milde them godum mannum the God lufedon, and ofer eall gemett stearc tham mannum the withcwædon his willan. . . . Betwyx othrum thingum nis na to forgytane the gode frith the he macode on thisan lande, swa thæt an man mihte faran ofer his rice mid his bosum full goldes ungederad. (1087.)

(*b*) Clerici rectati et accusati de quacunque re, summoniti a Justitia regis venient in curiam ipsius, responsuri ibidem de hoc unde videbitur curiae regis quod ibidem sit respondendum.—Laici non debent accusari nisi per certos et legales accusatores et testes in praesentia episcopi.—Si calumnia emerserit inter clericum et laicum de ullo tenemento quod clericus ad eleemosinam velit attrahere, recognitione duodecim legalium hominum per capitalis Justitiae regis considerationem terminabitur.—Catalla eorum qui sunt in forisfacto regis non detineat ecclesia vel cimiterium contra justitiam regis, quia ipsius regis sunt. (1164.)

(*c*) Nullum scutagium vel auxilium ponatur in regno nostro nisi per commune consilium regni nostri.—Et ad habendum commune consilium regni de auxilio assidendo . . . summoneri faciemus archiepiscopos, episcopos, abbates, comites, et majores barones sigillatim per litteras nostras . . . et in generali, per vice-comites et ballivos nostros, omnes illos qui de nobis tenent in capite.—Communia placita non sequantur curiam nostram sed teneantur in aliquo loco certo.—Nullus liber homo capiatur vel imprisonetur . . . nisi per legale judicium parium suorum vel per legem terrae. (1215.)

(*d*) Si fet a remembrer ke le commun eslise xii prodes hommes, ke vendrunt as parlemenz et autre fez quant mester serra, quant le rei u sun cunseil les mandera, pur treter de besoingnes del rei et del reaume; et ke le commun tendra pur estable ceo ke ces

xii frunt. E ceo serra fet pur eparnier le cust del commun. (1258.)—Les douze pairs et les hauts barons de France . . . donnèrent le royaume de commun accord à monseigneur Philippe de Valois et en ôtèrent la reine d'Angleterre et le roi son fils ; . . . le royaume ne doit mie par succession aller à femelle ni à fils de femelle. (1328.)

(*c*) Sicut lex justissima . . . hortatur ut quod omnes tangit ab omnibus approbetur, sic et nimis evidenter ut communibus periculis per remedia provisa communiter obvietur.—Praemunientes priorem et capitulum ecclesiae vestrae, archidiaconos, totumque clerum vestrae diocesis, facientes quod iidem prior et archidiaconi in propriis personis suis, et dictum capitulum per unum, idemque clerus per duos procuratores idoneos . . . una vobiscum intersint. —Tibi praecipimus quod de comitatu praedicto duos milites et de qualibet civitate duos cives et de quolibet burgo duos burgenses . . . eligi facias . . . ad faciendum quod tunc de communi consilio ordinabitur. (1295.)

SECOND PAPER.

THURSDAY, *6th April* 1899.— 2 *to* 5 *o'clock.*

(*Six Questions only to be answered.*)

1. Give a brief account of the "Revolution Settlement" (1689-1701).

2. Compare the limited monarchy thus established with the Stuart kingship, on the one hand, and with the British kingship of the present day.

3. Mention and discuss the constitutional landmarks of the reign of William III. other than the Bill of Rights and the Succession Act.

4. Sketch the history of the duration of Parliament from the Ordinances of Edward II. down to the Triennial Act of 1694.

5. Sketch the history of trials for treason from 1352 to 1696.

6. Trace the history of the two great political parties from the time of Charles II down to 1707.

7. Describe briefly the chief ministers of William III., and explain generally the nature of his policy.

8. "The censorship of the press, which once belonged to the royal prerogative, expired in 1695." Explain.

9. State and discuss the Aylesbury Election case.

EUROPEAN CONSTITUTIONS.

THIRD PAPER IN CONSTITUTIONAL HISTORY.

FRIDAY, *7th April* 1899.—9 A.M. *to* 12 NOON.

I. Sketch the constitutional history of *two* of—*One* of the English colonies of North America; France; Switzerland; Germany (1806-70); Hungary; Denmark.

II. Summarise and criticise the constitution of *two* of—France, Switzerland, Prussia, the German Empire, Hungary, Denmark, Norway.

III. Discuss *two* of the following subjects:—

(*a*) Nature and object of a "Constitution."

(*b*) "Great Britain possesses no Constitution."

(*c*) Constitutions how framed, adopted, amended, and classified.

(*d*) Salient differences between the polities of Great Britain and Switzerland.

(*e*) The French and the Prussian polity contrasted.

(*f*) Austria-Hungary—a constitutional study.

HISTORY OF STATE AND CHURCH, 1384-1563.

FOURTH PAPER IN CONSTITUTIONAL HISTORY.

FRIDAY, *7th April* 1899.—2 *to* 5 *o'clock.*

(*No.* 9 *and* FIVE *others only to be answered.*)

1. Review Wycliffe's doctrines, especially as bearing on politics.

2. (*a*) Lollardy is said to have been stamped out by the Statute of Leicester (1414) and by the execution of Oldcastle (1417). Examine and discuss.—*Or* (*b*) "Wycliffe's influence died with him." Confute, partly by reference to Bohemia.

3. State briefly the constitutional doctrines of Sir John Fortescue.

4. Define Dean Colet's place in the evolution of civil and religious liberty.

5. Sketch the career, and name the chief works, of either Erasmus or Sir Thomas More.

6. Describe in outline the condition of the Church in England from 1384 to 1515.

7. Review the part taken by Henry VIII. in the English Reformation. How far were foreign influences at work?

8. Explain the attitude of Queen Elizabeth towards the Roman Catholics and the Puritans respectively.

9. Explain and discuss *three* of :—

i. (*a*) Temporal lords may take away the godes fro the Church whan the persones trespasin.—(*b*) Mani foul errouris multiplied Wiclef more than Berengari.—(*c*) The Pope is Anticrist; bischoppis be his membris; and freres be his tayl.—(*d*) The Speker (1403) answered that swech summes myte not be rered so ofte in the puple, but if the Cherch shuld be put fro her temporaltes.—(*e*) "Accidentia sine substantia." (*f*) "Letters of fraternity."

ii. (*a*) Bischopes and bachelers that have cure under Crist liggen in London.—(*b*) Loue is leche of lyf and also the graith gate that goth into heuene.—(*c*) Pardoneris sente Falsenesse with seles on sondayes to cherches.—(*d*) Mede tolde hym a tale and toke hym a noble forto ben hire bedeman.—(*e*) "Peter," quod the prest, "I can no pardon fynde, but dowel and haue wel, and God shal haue thi sowle!"

iii. Haueua per moglie il Re d'Inghilterra Chaterina, figliuola già di Ferdinando e di Helisabella, Re di Spagna . . . del quale matrimonio essendo nato uno figliulio maschio, che con immatura morte fu tolto loro, non ne nacque altri figliuoli, che una figliuola femmina: la qual cosa dette occasione a molti della corte di mormorare, che per essere il matrimonio inlecito erano stati miracolosamente priuati de figliuoli maschi. Da che e dal desiderio che sapeua hauere il Re de figliuoli, presa occasione il Cardinale Eboracense, cominciò a persuadere al Re che, ripudiata la prima moglie, contrahesse un' altro matrimonio.

iv. Non potest rex Angliae ad libitum suum leges mutare regni sui, principatu namque nedum regali, sed et politico, ipse suo populo dominatur . . . nec leges ipse sine subditorum assensu mutare poterit, nec subjectum populum renitentem onerare impositionibus peregrinis, quare populus eius libere fruetur bonis suis, legibus quas cupit regulatus, nec per regem suum aut quemvis alium depilatur. Ad tutelam namque legis subditorum ac eorum corporum et bonorum rex hujusmodi erectus est, et hanc potestatem a populo effluxam ipse habet, quo ei non licet potestate alia suo populo dominari.

BRITISH HISTORY.

FIRST PAPER.

TUESDAY, *4th April* 1899.—9 *to* 12 *o'clock.*

N.B.—*Not more than* FOUR *questions to be attempted in each section.*

SECTION I.

1. Give an account and explanation of the growth or decay of towns between the Roman and the Norman Conquests.

2. Illustrate the importance of the reign of Malcolm Canmore in the history of Scotland.

3. Illustrate the importance of Domesday Book from the political, social, and economic points of view.

4. Trace, and account for, the changes in the relations of the Papacy to the English Crown, from 1066 to 1265.

5. What were the causes of the Peasants' Revolt in 1381?

6. Sketch the career of Richard, Duke of York, and examine (1) his claim, (2) his qualifications, for the throne.

7. Illustrate from the history of Scotland in the fifteenth century the dangers of feudalism, and describe the policy adopted for overcoming them.

SECTION II.

8. How far were the insurrections in England in the sixteenth century due to religious causes, and how far to economic?

9. Criticise the settlement of Ireland by William III, and sketch the subsequent treatment of that country down to 1760.

10. Illustrate and account for the fact that bribery was more prevalent in the House of Commons in the eighteenth century than at any time before or since.

11. Estimate the character of Chatham (1) as a constitutional statesman, (2) as a Colonial statesman, (3) as a war minister.

12. What attempts were made by Britain to oppose France on the Continent from 1793 to 1813, and why were they mostly unsuccessful?

13. Show how the possession of India has affected British policy from 1815 to 1885.

14. Compare the political system of Canada since 1867 with that existing in 1837, and explain the steps by which the change was effected.

SECOND PAPER (Special Period and Authorities).

TUESDAY, *4th April* 1899.—2 *to* 5 *o'clock.*

N.B.—*Not more than* FOUR *questions to be attempted in each section.*

SECTION I.

1. Sketch the career of Bacon, *or* of Buckingham, and point out the characteristics of the time exemplified thereby.

2. What important judgments, bearing on taxation, were given between 1603 and 1640? Explain their political effect, and indicate the arguments used on both sides, in each case.

3. Describe the part played by Chartered Companies in the expansion of England in the seventeenth century.

4. How far, and by what means, had the Stuart kings succeeded by 1637 in altering the constitution of the Presbyterian Church of Scotland as established in 1592?

5. What were the causes of the Irish Rebellion of 1641, and what effect had it on the struggle between King and Parliament?

6. Indicate, by a map if possible, where Charles I's strength lay at the opening of the struggle with Parliament. What circumstances and events enabled him to rally round himself so large a body of supporters?

7. Illustrate and account for the fact that the Long Parlia-

ment of Charles II's reign was anti-Puritan at the beginning, and anti-Catholic at the close of its career.

8. What are the chief provisions of the Bill of Rights? Examine the Bill as (1) a summary of James II's unconstitutional proceedings, and (2) a decision of the seventeenth century struggle between King and Parliament.

SECTION II.

9. Give a summary of the changes demanded by the Commons in the Nineteen Propositions, and characterise the political system that would have resulted from their acceptance by Charles.

10. What attempts were made to bring about an agreement with the King from 1642 to 1646, and why did they fail?

11. Describe the events and negotiations which led up to the Second Civil War.

12. Describe, with sketch-plans if possible, any *two* of Cromwell's great victories, and criticise Carlyle's account of them.

13. Illustrate Cromwell's attitude towards Parliamentary Government from his speeches to his different Parliaments, and criticise Carlyle's comments on that attitude.

14. Give a summary of the provisions of the Instrument of Government, and point out its excellences and defects as a constitution for Britain in 1653.

GREAT BRITAIN AND EUROPE, 1815–1878.

FIRST PAPER.

WEDNESDAY, *5th April* 1899.—9 *to* 12 *o'clock.*

N.B.—*Not more than* EIGHT *questions to be attempted, of which at least* TWO *should be taken from the second section.*

SECTION I.

1. Compare the revolutionary movements in Spain and Italy, in 1820-'21, in regard to origin, nature, and results.

2. Sketch the history of the Greek insurrection, down to the attainment of political independence; and explain the success of the movement.

3. Compare the character and policy of Louis XVIII with those of Charles X.

4. Examine the results of the *Entente Cordiale* between Great Britain and France, and show how it was weakened in the latter part of Louis Philippe's reign.

5. Describe the origin and development of the Zollverein, and indicate its political importance.

6. Sketch the life and illustrate the character of Charles Albert, King of Sardinia.

7. Describe the aims and proceedings of the Frankfort parliament during the year 1848.

8. Trace and explain the events which led to the outbreak of war between Austria and Hungary.

Section II.

9. Discuss the part taken by Lamartine (*a*) in preparing the Revolution of February, (*b*) in the subsequent conduct of affairs.

10. Examine the aims and principles of the working classes and their leaders in Paris, as described and defended by Louis Blanc.

11. Give the substance of Lamartine's remarks on the influence of journalism; the foreign relations of France before 1848; the financial difficulties of the Republic; the demands of Blanqui in March 1848.

12. What does Louis Blanc say about the faults of Louis Philippe's government: the action and influence of Lord Normanby; the foreign policy of the Provisional Government: the election of Louis Bonaparte to the National Assembly?

SECOND PAPER.

WEDNESDAY, *5th April* 1899.—2 *to* 5 *o'clock.*

N.B.—*Not more than* EIGHT *questions to be attempted.*

1. Discuss Frederick William's refusal of the Imperial Crown, and trace the political consequences of his action.

2. Describe the military operations in the Austrian Empire in 1849, and account for the triumph of the Imperial Government.

3. Show how Napoleon III's dependence on the Clerical party affected his policy throughout his reign.

4. Explain the questions in dispute and the negotiations which led up to the Crimean War.

5. Sketch the career and discuss the character of Cavour.

6. Describe the struggle of King William of Prussia and his Ministers with Parliament, and explain the constitutional questions involved.

7. Explain the forces that worked for and against the union of Southern Italy with Sardinia, and show how the union was ultimately accomplished.

8. Give a brief sketch (with maps) of the Seven Weeks' War, and account for the triumph of the Prussians.

9. Explain the different phrases that marked the relations of France and Britain from 1855 to 1870.

10. Describe and criticise the policy pursued by Bismarck with reference to the eventuality and the actual outbreak of war with France.

11. Give an account of the consolidation of the Republican party in France from 1870 to 1878.

12. Describe the condition of the Christian provinces of Turkey between 1856 and 1878, and explain how far and under what circumstances autonomy was granted to them.

ENGLAND, SCOTLAND, FRANCE, AND BURGUNDY, 1415-1485.

FIRST PAPER.

TUESDAY, *4th April* 1899.—9 *to* 12 *o'clock.*

N.B.—*Not more than* EIGHT *questions to be attempted, of which at least* TWO *should be taken from the second section.*

SECTION I.

1. Explain the system of government and administration in France in the early part of the fifteenth century. What light is thrown on it by the Ordonnance Cabochienne?

2. What part did (*a*) the French crown, (*b*) the University of Paris take in the healing of the Great Schism?

3. Discuss the character and policy of Henry V. Do you consider Shakespeare's portrait of him correct?

4. What part did Scotland and Scotsmen take in the struggle between England and France during the first half of the fifteenth century?

5. Trace the growth of faction in England from 1422 to the death of Suffolk, and explain its bitterness.

6. Sketch the history and illustrate the importance of the Douglas family under James I and James II.

7. Trace and explain the growth of Burgundian power under Duke Philip the Good.

8. What light does the career of Louis as Dauphin throw on his character?

SECTION II.

9. What do you know of the Paston family, its possessions and political connexions, and its relation with Sir John Fastolf?

10. Give illustrations from the Paston Letters of the anarchy which prevailed in England during the middle of the fifteenth century.

11. Sketch the life of Sir John Fortescue, and estimate the value of his criticisms on contemporary politics.

12. Discuss Sir John Fortescue's remarks on the difference between *dominium regale* and *dominium regale et politicum*; the political importance of finance; robbery in England, Scotland, and France; the King's Council.

SECOND PAPER.

TUESDAY, *4th April* 1899.—*2 to 5 o'clock.*

N.B.—*Not more than* EIGHT *questions to be attempted, of which at least* TWO *should be taken from the second section.*

SECTION I.

1. Compare the dominions and powers of France and Burgundy, in extent and resources, at the outset of the reign of Louis XI.

2. What part do the affairs of Liège play in the struggle between Louis and Charles? Describe the political position and government of that city.

3. Sketch the history of the Kingdom of Navarre, and the fortunes of its rulers, during your period.

4. What rank would you assign to Richard, Earl of Warwick, as a statesman and as a commander? Why has he been called the "Last of the Barons"?

5. Relate the events which led to (*a*) the invasion of France by Edward IV, (*b*) the comparative failure of that invasion.

6. What light do Louis's relations with Switzerland after, 1461 throw on his character and policy?

7. Account for the early successes and the subsequent failure of James III.

8. Give the provisions and explain the importance of the treaties of Conflans, Senlis, Soleure, St Jean de Luz, Arras (1482).

Section II.

9. Sketch the life of Philippe de Comines, and estimate his value as an historian.

10. Deduce from the works of Comines his views on political morality. What relation do they bear to those of Machiavelli?

11. Give the substance of Comines' remarks on the character and ability of Louis XI; the infatuation of Charles the Rash; the English constitution; the meetings of princes; the use of history.

12. Translate and comment on the following passages:—

(*a*) En retournant aux dues de Normandie et de Bretagne qui estoient allés prendre la possession de la duché de Normandie, incontinent que leur entré fut faicte à Rouen, ils commencèrent à avoir division ensemble, quand ce fut à départir le butin.

(*b*) À ce propos usoit le roy Louis d'un mot à mon gré bien sage, où il disoit que "quand orgueil chevauche devant, honte et dommage le suivent de bien près": et de ce péché n'estoit il point entaché.

(*c*) Le Comte de Sainct Paul, connestable de France, homme très sage, et autres serviteurs du duc de Guyenne, désiroient plustost la guerre entre ces deux grands princes que paix, pour deux raisons.

(*d*) Jamais ne se mena traicté entre les Francois et Anglois, que le sens des Francois et leur habilete ne se montrast pardessus celle des Anglois.

(*e*) Tout ainsi comme en ce propre lieu de Nancy il avoit commis ce crime injustement, après qu'il eust remis le second siège, et fait mourir le-dit Cifron . . . fut à cette propre place déeu et trahy par celuy auquel plus se fioit.

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Engineering.

MATHEMATICS.

FIRST PAPER.

FRIDAY, 14*th October* 1898.—11.30 A.M. *to* 1.30 P.M.

1. A right circular cone of height h standing on a base of radius r has its top cut off by a horizontal plane at a height h' from the base. Find the volume of the portion left.

Find the ratio of h' to h in order that the volume left may be $\frac{7}{12}$ of that of a cylinder of height h' and radius r.

2. Find an expression for the surface of a sphere of radius r.

The ascent to an entrance consists of a flight of semi-circular steps of solid stone. The first step is 8 feet in radius, the second 7 feet, and so on, while each step is 10 inches high. Find the solid content of the masonry.

3. The equation $x^4-2x^3-3x^2+10x-4=0$ has two real roots. Find between what integers each root lies.

4. If 5, 8, and 35° be two sides and the contained angle of a triangle, find to three significant figures the third side, and also the other two angles.

5. Two cones of light project on a screen two circular light spots which overlap each other. The diameters of the spots are 5 feet and 8 feet respectively, and their centres are 3 feet apart. Find the amount of area common to the two spots. (Use Tables.)

6. Find an expression for the volume of a solid anchor ring of circular section, whose inside diameter is a, and whose outside diameter is b.

7. Find the area of a triangle, the equations of whose sides are $3x+4y=1$; $2x-2y+3=0$; $x-3y=7$.

8. Find the tangent of the angle between two lines whose equations in rectangular co-ordinates are given.

Find the altitudes of the triangle formed by the three lines $y+2=0$, $y^2=(x-3)^2$, and use your tables to determine the angles of the triangle.

9. Prove Simpson's or Poncelet's rule for measuring a rectangular field, one of whose sides is replaced by a curved line.

The graph of $y=x^2$ is traced in a diagram. If O be the point (0, 0) on it, P the point (10, 100), and PM the ordinate from P, find the area of OMP cut off between OM, MP, and the curve, by taking all the ordinates corresponding to integral values of the abscissae, and applying the rule you adopt.

Tell exactly by how much your calculation is wrong.

10. Trace the graphs of

$$\text{(i) } (x^2-x)^2/(x^2-5x+2); \qquad \text{(ii) } \frac{x}{\sin x}.$$

Shew that the graph of (ii) never cuts the x-axis.

SECOND PAPER.

FRIDAY, 14*th October* 1898.—2.30 *to* 5.30 P.M.

1. Give the locus definition of a conic, and deduce directly that the tangents at all points where the conic meets its axis are parallel.

Given of a conic the directrix, the eccentricity, and a tangent with its point of contact, find the focus.

2. Find, and discriminate between, the maximum and minimum values of $(2x^2-3x+3)/(x^2-1)$.

3. How would you tell whether a given equation of the second degree in x and y, representing a conic, is a Parabola, an Ellipse, or a Hyperbola?

Tell the nature of the following curves, and roughly trace them:—

$$y^2-x^2+y+x=0 \qquad \text{(i)}$$

$$y^2-x^2-2y+x=0 \qquad \text{(ii)}$$

$$y^2-2xy+x^2+y+x=0 \qquad \text{(iii)}$$

4. State Horner's rule for solving a given numerical equation.

If $\cos 3^\circ = \cdot 998629$, find an equation for $\cos 1^\circ$, and find $\cos 1^\circ$ accurately to 8 places of decimals.

5. Prove that a determinant is unaltered by the addition of the constituents of any row to those of any other row.

Find the value of the determinant,

$$\begin{vmatrix} 1^3 & 2^3 & 3^3 & 4^3 \\ 2^3 & 3^3 & 4^3 & 5^3 \\ 3^3 & 4^3 & 5^3 & 6^3 \\ 4^3 & 5^3 & 6^3 & 7^3 \end{vmatrix}$$

6. Find from first principles the differential coefficient of $\tan x$.

Differentiate $\operatorname{sech} x$, and $\cos(\cos x)$.

7. Shew how to find the envelope of a curve whose equation contains an arbitrary parameter a.

Find the envelope of the curve $x^2+ay^2=a^2$.

Illustrate with a diagram, and furnish any explanations you may think necessary.

8. Evaluate (i) $\int dx/\tan x$

(ii) $\int dx/(x^3-1)$

(iii) $\int dx \cos^2 x \sin^3 x$.

9. Shew with the aid of the integral calculus that the area of the ellipse whose equation is $x^2/a^2+y^2/b^2=1$ is πab.

Find the area cut off between the parabola $y=x^2$, and the circle $x^2+y^2=2$.

10. Shew how to find moments of inertia in Cartesian co-ordinates.

Find the moment of inertia of an elliptic disc about a line through its centre perpendicular to its plane.

11. Trace the curve $r^2=a^2\cos 3\theta$, and find the area of one of its loops.

12. Find the centroid of a hemisphere (i) of uniform density; (ii) of density varying as the square of the distance from the base of the hemisphere.

Public Health.

LABORATORY WORK.

MONDAY, *27th March* 1899. 10 *to* 12 *o'clock.*

I.—PHYSICAL PROPERTIES OF SOIL.

What is meant by—

(1) The Porosity; (2) The Permeability; (3) The Water Capacity of a Soil? How is each of these determined?

II. Describe Neisser's method of staining. How is it applied for Bacillus Diphtheriæ, and what is its diagnostic value?

III. How is the amount of oxidizable organic matter in a potable water determined? Point out any fallacies in the interpretation of the results. Describe the rationale of the process.

PRACTICAL WORK.

The following are examples of what have been given at the Examinations:—

(This part of the Examination lasts four days.)

1. Determination of Albumen Fat and sugar in a sample of milk.

2. To separate and recognise by culture, staining, etc., the

Bacillus of Typhoid Fever from a mixed culture containing this Bacillus.

3. Analysis of, and report on, a sample of potable water.

Each Candidate must recognise Bacteriological Cultures by means of Cultivation, Staining, and Microscopical Examination.

PHYSICS.

MONDAY, 27*th March* 1899.—1 *to* 3 *o'clock.*

1. Define acceleration and force, stating what are the units of these in the C. G. S. system.

What experimental law is the basis of our ways of measuring the mass of a body? By what methods may this law be proved, and which method is the most accurate?

2. State some important phenomena connected with viscosity and porosity.

3. What is interference in sound waves? Describe interference phenomena connected with (*a*) a tuning-fork; (*b*) a fog-horn. Explain how the energy is distributed when two trains of waves interfere.

4. Describe a dynamo.

A dynamo whose electromotive force is E and resistance r, drives a motor which requires an electromotive force e and has a resistance r^1. If the resistance of the connections be R, find the rate at which work is done by the dynamo and absorbed by the motor.

5. Give the law connecting the pressures at two points of a fluid, and give a general explanation of the concave form of the free surface of a liquid rotating about a vertical axis.

If a pipe can stand a pressure of 10^7 dynes per sq. cm., find how high a cistern may be above the lowest level of the pipe ($g=981$ C. G. S. units).

6. On what does the pressure of a vapour in presence of its

liquid depend? Under what conditions is it impossible for a liquid and its vapour to coexist in the same vessel?

7. What are the laws of refraction? Show how the image of an object is formed in a compound microscope, and indicate how the magnifying power is measured.

8. Explain the principle on which the action of a spectroscope depends. What is an absorption spectrum, and what may we learn from it?

9. State the laws of electrolysis, and describe some practical applications.

10. Give a general account of the facts of terrestrial magnetism. In particular, explain how the magnet dip at any given locality is measured.

GEOLOGY.

TUESDAY, 19*th July* 1898.—1 *to* 3 *o'clock.*

1. What are the various considerations to be kept in view in the search for an Artesian Water-supply?

2. What are *Faults* and *Dykes*? Show what effect they have in the distribution of underground water.

3. Show by means of one or more sections how geological structure affects the form of the ground in regions which have been long exposed to denudation.

4. What evidence in the field would suggest the presence of a Fault, even if the fault itself were not exposed in section?

5. Distinguish between a Plain of Accumulation and a Plain of Erosion.

6. Describe the system of Joints in ordinary sedimentary rocks.

FINAL SCIENCE EXAMINATION.

Pure Science.

MATHEMATICS.

NATURAL PHILOSOPHY.

The papers in Mathematics and Natural Philosophy are the same as for the Degree of M.A. with Honours in Mathematics and Natural Philosophy.

ADVANCED EXPERIMENTAL PHYSICS.

THURSDAY, 30*th March* 1899.—9 *to* 12 *o'clock.*

1. Give an account of the theory and phenomena of interference shown by (*a*) interference mirrors, (*b*) an interference prism.

2. State, and carefully explain, the interference phenomena observed when a bright point is placed in front of an ordinary mirror, whose surface has been dimmed with moisture.

3. A plane wave of light is incident on a plane surface of a doubly refracting crystal. Explain what takes place inside the crystal, especially in regard to direction of the ray, position of the wave front, and direction in which energy is transmitted, for both rays.

4. Give an account of the effects of electrostatic force on a beam of light.

5. How can the wave-length of electromagnetic oscillations be found?

6. How would you investigate, by means of a circular resonator, the electromagnetic field in the neighbourhood of a rectilinear oscillator?

7. Give a general account of the phenomena which accom-

pany the discharge of electricity through a gas. Discuss specially the influence of a magnetic field upon the discharge.

8. Discuss Ewing's method of representing a magnetic medium by means of a number of small magnets, each of which is free to rotate under the influence of magnetic force. Show how the model illustrates various magnetic phenomena.

9. What is meant by magnetic hysteresis?

10. Describe the method of producing artificial twinning of Iceland spar. Give a possible explanation.

11. Describe fully the production of combination tones, and discuss Helmholtz's and Koenig's views on the subject.

12. Describe the indirect and direct methods of finding the specific heat of a gas at constant volume.

ASTRONOMY.

FIRST PAPER.

MONDAY, *27th March* 1899.—9 *to* 12 *o'clock.*

1. How may the Equatorial Intervals of the wires of a Transit Instrument be determined? The transit of the Moon's limb is observed over a wire remote from the centre. Show how the observation can be reduced to give the time of transit over the centre wire. If the western pivot of a transit instrument is too high by α'' and too far north by β'', show that the time of transit over the centre wire is unaffected for a star whose North Polar Distance = colatitude + $\tan^{-1}\left(\frac{\tan\alpha}{\tan\beta}\right)$.

2. Explain the construction and use of a mural circle. A mural circle is provided with four equidistant microscopes. What errors are eliminated by their use, and why?

3. Discuss the nature of the evidence on which our knowledge of the figure of the Earth is based. Find the distance of any

point on the Earth's surface from its centre, in terms of the latitude of that point and the eccentricity of the Earth's meridians.

4. Construct a numerical example to illustrate the application of the method of interpolation with third differences. Interpolate two equidistant values of the function corresponding to intervals of one third of the argument.

5. Enunciate Kepler's Laws. From what observations was the second deduced, and how was the third incorrect? Deduce the law that a planet moves under a central force, and prove that its velocity at any point is inversely proportional to the distance of the centre from the tangent to the path.

6. State (without proof) Lambert's Theorem. Prove that the time through an arc of a parabolic orbit bounded by a focal chord varies as $(\text{chord})^{\frac{3}{2}}$.

SECOND PAPER.

MONDAY, *27th March* 1899.—1 *to* 3 *o'clock.*

1. Show how the latitude of a place can be conveniently determined by observations of the altitude of the Pole Star. Define the amount of error arising from the neglect of small terms of the series.

2. Explain how the mass of the Sun and of a planet can be compared. Prove that $\frac{\odot\text{'s mass}}{\oplus\text{'s mass}} = \text{approximately } 352000$; given Solar parallax $= 8''{\cdot}8$, $\mathbb{D}$'s mean distance $= 60$ $\oplus$'s radius, $\mathbb{D}$'s mean geocentric angular motion $= 13$ times $\odot$'s.

3. If r and v be the radius vector and true anomaly of a comet, the co-ordinates x, y, z, referred to the equator can be expressed in the form $x = ar \sin(v+A)$, $y = br \sin(v+B)$, $z = cr \sin(v+C)$. Determine the constants a, b, c, A, B, C in

terms of the elements of the orbit and the obliquity of the ecliptic.

4. Write a description of the peculiarities that have been observed in the motion of Encke's comet. What is the evidence of connection between comets and meteoric showers?

CHEMISTRY.

FIRST PAPER.

MONDAY, 18*th July* 1898.—9 *to* 12 *o'clock.*

(FIVE *Questions to be answered.*)

1. How is Potassium ferricyanide prepared? Under what conditions does it act as an oxidising agent?

2. Gold leaf dissolves when shaken up with Potassium cyanide solution. Explain the chemical action.

3. How is Silicon Fluoride prepared? What is its action on water? What use is made of these reactions in inorganic analysis?

4. What is meant by the term "Isomorphism"? Give three examples illustrating your answer.

5. Give a sketch of the general methods of preparation of the Alcohols. What are the general properties of these substances? How are they classified?

6. On what grounds has the formula $CH_3.CO.CH_3$ been given to Acetone?

7. Write a short essay on the Diazo-compounds.

SECOND PAPER.

MONDAY, 18*th July* 1898.—1 *to* 3 *o'clock.*

(FIVE *Questions to be answered.*)

1. What evidence is there for an unsymmetrical constitution

in the Sulphites? Give a short account of the esters of Sulphurous acid.

2. Describe the preparation of one of the ammoniacal cobaltic salts, and give a general account of this class of compounds.

3. Discuss shortly any two of the following:—

(*a*) The Configuration of a compound containing one or more asymmetric carbon atoms.

(*b*) The discovery of Oxygen.

(*c*) Hooke's views respecting Combustion.

4. What experimental data are required in order to determine the specific rotatory power of an optically active substance? Describe shortly how such a determination is actually made.

5. Describe as fully as you can the members of the felspar group of minerals, discussing the chemical and crystallographical relationships existing between them.

6. How would you determine, by means of an ordinary polarising microscope, whether an apparently cubic crystal belonged to the tesseral, the tetragonal, or the rhombic system; and whether a prismatic crystal belonged to the rhombic or the monoclinic system.

7. Give a short account of the action of reducing agents on aromatic substances.

8. How is Antipyrine prepared? What is its constitution?

9. How is Isoquinoline prepared? How would you distinguish it from Quinoline?

HUMAN ANATOMY (INCLUDING ANTHROPOLOGY).

FIRST PAPER.

WEDNESDAY, 20*th July* 1898.—9 *to* 12 *o'clock.*

1. Write a comparative description of the human hand and

foot, with reference to (*a*) the length of the digits; (*b*) the movements of the pollex and hallux; (*c*) the tegumentary grooves on the palm and sole; (*d*) the significance of these grooves.

2. Arrange the vertebræ into groups and give the formula; state the proportion in each group of vertebral bodies and intervertebral discs; explain the production of the curvatures found in the adult spine.

3. Describe the position and arrangement of the principal fissures and convolutions in the brains of man and the chimpanzee.

SECOND PAPER.

WEDNESDAY, *20th July* 1898.—1 *to* 3 *o'clock*.

1. Describe the mode of taking the Cephalic (length-breadth) index in—(*a*) the skull, and (*b*) the living person.

State the rule employed in reducing one to the other. Refer to their respective groups: *A*, a skull 183 mm. long, 133 broad; *B*, one, 179 mm. long, 138 broad; *C*, one, 174 mm. long, 150 broad. Show your mode of computing the index in each case.

2. Explain the meaning of the terms platypellic, platyknemic, brachykerkic, prognathic. How would you determine the characters expressed by these terms?

3. What colour and character of hair would you expect to find associated with (*a*) black skin, (*b*) yellow skin, (*c*) blonde skin? State any exceptions to the general rule which may occur to you.

4. Explain the mode of taking the Nasal index in (*a*) the skull, and (*b*) the living person. Give the reason why the index is so much higher in one than in the other.

PHYSIOLOGY.

FIRST PAPER.

FRIDAY, 31*st March* 1899.—9 *to* 12 *o'clock.*

(FOUR *questions to be answered.*)

1. Discuss fully the phenomena of Electrotonus, giving experiments to illustrate the various changes produced in a nerve by the passage of a constant current through it.

2. Give a detailed account of the experimental methods adopted by Neill Stewart to estimate the circulation time, and describe any modifications of it known to you.

3. (*a*) Describe the structure of the Mammary gland.
   (*b*) What are the chemical changes that produce coagulation of milk, and how are they initiated?
   (*c*) Contrast the coagulation of milk with that of blood.

4. (*a*) Describe the structure of a full-grown Graafian follicle, and state the changes occurring in the ovum during maturation.
   (*b*) What is meant by "Reduction mitosis"? Compare the corresponding process, if any, in the male element, and state the probable reason for its occurrence.

5. Give a detailed account of the movements of the heart, as studied with the aid of a capillary electrometer.

SECOND PAPER.

FRIDAY, 31*st March* 1899.—1 *to* 3 *o'clock.*

(THREE *questions to be answered.*)

1. Give a short account of the most recent views with regard to the constitution of Proteids.

2. What evidence is there in the adult mammal of a segmental (metameric) connection between the central nervous system and the periphery?

How is this represented in the spinal cord in the case of the fore limb?

Discuss, in this relationship, the value of such phenomena as the "knee-jerk."

3. (*a*) Describe fully the structure of the cerebellum; give its connections with the spinal cord, medulla, pons, and cerebrum.

(*b*) State what is known regarding the functions of the cerebellum, and give the experiments that have led up to our present knowledge of the subject.

4. How is it possible to test qualitatively and quantitatively the alterations in Nitrogen metabolism occurring in the organism?

5. How would you record the respiratory movements of a rabbit?

State the changes produced in the respiratory tracing by the section and stimulation of various nerves, by alterations of temperature, and by performance of other bodily functions.

GEOLOGY (INCLUDING MINERALOGY AND PALÆONTOLOGY).

FIRST PAPER.

TUESDAY, 19*th July* 1898.—9 *to* 12 *o'clock.*

[*Not more than* SIX *questions to be attempted.*]

1. Describe the process of weathering. Give as illustrations the weathering of Granite, Limestone, Quartzite, and describe the chemical and mechanical changes involved in each case.

2. Give an account of the composition and origin of the following rocks:—Serpentine, Marble, Silicious Sinter, Clay slate, and Blackband Ironstone.

3. How would you distinguish Hornblende from Zinc-blende, Gypsum from Calcite, Pyrite from Chalcopyrite, and Quartz from Topaz?

4. What typical fossils would enable you to distinguish between Carboniferous Limestone, Silurian Limestone, Jurassic Limestone, and Devonian Limestone?

5. Give the leading characters of Dinosauria. What is the geological range of the order?

6. Refer the following type-fossils to their respective classes and give their geological range:—*Olenellus callavei*, *Anodonta Jukesi*, *Mastodonsaurus giganteus*, *Turrilites costatus*, *Cervus megaceros*.

7. Describe the characteristic features of *Necks*, *Intrusive sheets*, and *Dykes*, and illustrate your answer by sections showing the typical structures.

8. Give some account of the various microscopic structures seen in the groundmass of hemi-crystalline igneous rocks.

9. Define the terms:—*idiomorphic*, *allotriomorphic*, *pegmatitic*, *phenocryst*, *foliation*, and *ophitic*.

10. Describe the various crystal-forms assumed by Orthoclase and Plagioclase.

11. A river flows along the strike of a series of sedimentary strata (sandstones and shales) dipping East at 15°, on which side of its course are cliffs most likely to be developed? Give reasons for your answer.

SECOND PAPER.

TUESDAY, 19*th July* 1898.—1 *to* 3 *o'clock*.

1. What are the characteristics of the group of rocks known as the Lamprophyres? Describe two typical members.

2. What are the changes by which a Sheared Gabbro passes into an Epidiorite?

3. What are the principal rock-forming minerals? Describe them, and show what is their distribution.

4. What are the principal kinds of Metasomatic change in Limestones, and what types of rock are in this way formed?

ZOOLOGY.

FIRST PAPER.

FRIDAY, 14*th October* 1898.—9 *to* 12 *o'clock.*

1. Write an account of the more striking peculiarities in the anatomy of Leeches. Discuss the zoological position of this group.

2. Classify the Mammalia, and mention two examples of each class, with their geographical distribution.

3. Describe the formation and adult structure of the thalamencephalon of a bird.

4. Describe the water-vascular system of a Starfish, and point out the modifications which the system presents in the various sub-divisions of the Echinodermata.

5. Write a short account of any *three* of the following:—*Archaeopteryx*, *Hatteria*, *Tarsius*, *Sagitta*, *Echinorhynchus*, *Fungia*.

6. Contrast the fauna of a Continental and an Oceanic Island.

BOTANY.

MONDAY, 27*th March* 1899.—9 *to* 12 *o'clock.*

1. Give an account of the views that have been advanced in explanation of the assimilation by green plants of CO_2, taken from the atmosphere.

2. What are the chief modes of sexual and asexual reproduction in the Chlorophyceae, Phaeophyceae, and Rhodophyceae?

3. Give an account of the relationships of the families of Gamopetalous Dicotyledonous plants.

4. Discuss the question of alternation of generations in plants, and give illustrative examples from the main classes of plants.

PRACTICAL BOTANY.

WEDNESDAY, 29*th March* 1899.—10 A.M. *to* 1 P.M.

Give a morphological account of specimen *A*.

Lay out its parts and name them.

Make microscopic sections to show the structure of the parts, mount them and leave for inspection.

Illustrate the external and internal features by drawings.

A. Phyllocladus rhomboidalis.

WEDNESDAY, 29*th March* 1899.—2 *to* 5 P.M.

1. Disect and lay out the parts of specimens *B*, *C*, *D*, *E*. Name them. Point out their resemblances and differences. What facts of the life-history of each of the plants do you learn from these specimens?

2. Refer plants *F*, *G*, *H*, *I* to their natural orders. State your reasons.

3. Describe and identify specimens *K*, *L*, *M*.

B. Galanthus nivalis.
C. Chionodoxa Luciliae.
D. Crocus sativus.
E. Megasea crassifolia.
F. Coprosma lucida.
G. Ceratopetalum gummiferum.
H. Astilbe japonica.
I. Dielytra spectabilis.
K. Trichomanes trichoides.
L. Asparagus plumosus.
M. Riccia fluitans.

THURSDAY, 30*th March* 1899.—9.30 A.M. *to* 12.30 P.M.

1. Compare and describe the phyllotaxy and leaf form in the specimens *N*, *O*, *P*, *Q*, *R*, *S*, *T*, *U*, *V*. What explanations can you offer of the positions and forms?

2. By means of the Flora provided, identify the plants *W*, *X*. Detail the steps in your process of identification.

3. Identify and describe the specimens *Y*, *Z*, *aa*, *bb*, *cc*, *dd*.

4. Make a series of microscopic preparations to show the structure of the inner surface of the pitcher. Leave them for inspection. Sketch them. Give a list of explanatory references.

5. Describe specimen *ee*. Give a physiological explanation of its features.

N. Crassula coccinea.
O. Crassula falcata.
P. Mesembryanthemum longum.
Q. Pellionia Daveauana.
R. Begonia Teuscheri.
S. Selaginella helvetica.
T. Acacia cultriformis.
U. Oxalis bupleurifolius.
V. Leucadendron sp.
W. Eleocharis palustris.
X. Mertensia maritima.
Y. Ruellia amoena.
Z. Quisqualis indica.
aa. Lepidophloios.
bb. Lepidostrobus.
cc. Stigmaria.
dd. Calamites.
ee. Begonia Rex—leaf propagation.

Engineering.

ENGINEERING.

MONDAY, 3*rd April* 1899.—9 *to* 11 A.M.

NOTE.—*Answers should, as far as possible, be illustrated by sketches or diagrams.*

1. Explain the use of a base-line in Surveying, and the special means used in great surveys to insure its accuracy.

2. The top of a spire, viewed from *A*, is α degrees above

the horizon. From B, which is 100 yards nearer, and in a straight line between A and the spire, it is β degrees above the horizon.

What is the height of the spire in terms of α and β?

3. Sketch a bridge to carry a roadway 40 feet wide over a double line of railway, the abutments and wings being of stone and the superstructure of steel, marking the general dimensions, and giving sections of the various girders.

4. Give the general qualities of a good building stone, and approximate prices for cube ashlar, polished face work, and common rubble.

5. A Railway Cutting 1000 yards long and 30 feet wide at the base is 60 feet deep at the centre, running down to 0 at both ends, and has side slopes of $1\frac{3}{4}$ horizontal to 1 perpendicular. What are the cubical contents?

MONDAY, *3rd April* 1899.—3 *to* 5 *o'clock.*

NOTE.—*Answers should, as far as possible, be illustrated by sketches or diagrams.*

1. If, in levelling, the rod is not held perpendicularly, in what way will a series of levels be affected? What is the line of collimation, and what is the result if it is too high?

2. Two lines meet at an angle of 120°. Insert a curve of 20 chains radius between them, giving the length of the tangents and the distance from the meeting of the two lines to the nearest point of the curve.

3. What are the special qualities of good Portland Cement, and what are the usual proportions of the various materials in Portland Cement Concrete for Harbour Works?

4. Sketch a stone viaduct of 5 arches to cross a river 400 feet wide, the height of the roadway above the water being 60 feet and the depth of water 20 feet. Show specially how to put in

the foundations, assuming the bed of the river to consist of mud twenty feet deep overlying hard boulder clay.

5. Make a full-size drawing of the section of a joint of a 12-inch diameter water-pipe, showing the form of the socket and how the joint should be made.

TUESDAY, *4th April* 1899.—9 *to* 11 A.M.

1. Explain fully what is meant by the Hydraulic Gradient of a Water-main.

What head will be necessary to pass 780 gallons of water per minute through a rusted cast-iron pipe, 18 in. diameter and 6 miles long?

2. How does Gordon's formula for the strength of pillars differ from Rankine's?

Using the former, calculate the load that may be safely carried on a round and hollow cast-iron pillar 7 in. internal diameter, 14 ft. high, and both ends of which are fixed; assuming the metal is 1 in. thick, and that 6 is the factor of safety adopted.

3. Sketch and describe some form of Condenser.

Steam enters a Surface Condenser at a temperature of 152° F., and is converted into water at 120° F. The circulating water enters at 60° F., and is discharged at 95° F.; calculate how many pounds of this water will be required for every pound of steam condensed.

4. A tube of mild steel is $\frac{1}{2}$ in. thick and 12 in. external diameter. Taking the allowable shearing stress at 4 tons per sq. in.,—find the maximum twisting moment the tube will bear; and also, in the case of a similar tube 6 feet long, determine the angle of twist, assuming the coefficient of torsional elasticity is 4687 tons.

5. Explain how motion is communicated to the slide valve of an engine.

The travel of such a valve is 5 in., the outside lap $1\frac{1}{8}$ in., and the inside $\frac{5}{16}$ in. The angle of advance being 30°, determine the positions of the crank at admission, cut off, release, and compression.

NOTE.—*Answers should, as far as possible, be illustrated by sketches or diagrams.*

WEDNESDAY, *5th April* 1899.—9 *to* 11 A.M.

1. Draw the Stress Diagram of the accompanying dimensioned sketch of a loaded truss.

2. A steel key has a taper of $\frac{1}{30}$ on one side, and is straight on the other. Assuming $\mu = \cdot 17$, determine the force necessary to drive in the key, if one of 1 cwt. is necessary to drive it out.

With what taper would the key jump back without drawing out?

3. Two concentrated loads of 4 and 6 tons respectively, and 10 feet apart, pass over a girder of 40 feet span. Find the maximum Bending Moment, and draw the Shearing Stress Diagram.

4. Show, by means of a temperature-entropy diagram, how the condensation which occurs during adiabatic expansion may be found for any degree of wetness of steam; and exhibit a graphic construction showing the relationship between a pressure-volume and a temperature-entropy diagram.

5. What is the *resilience* of a material or structure, and why is it sometimes necessary to know it?

The sectional area of a steel rod, 15 feet long, is $2\frac{1}{2}$ square in. The proof strain of the material is $\frac{1}{1000}$, and its coefficient of elasticity is 16,000 tons. What is the greatest weight that can be safely permitted to fall upon the end of the rod from a height of 27 feet?

NOTE.—*Answers should, as far as possible, be illustrated by sketches or diagrams.*

DRAWING.

FIRST PAPER.

THURSDAY, *6th April* 1899.—9 *to* 12 NOON.

I.—PLANE GEOMETRY.

1. Draw the cycloid for a rolling circle of 3 inches diameter, and the evolute to the curve. (Scale, full size.)

2. By method of co-ordinates draw a rectangular Hyperbola, making the necessary assumptions, and find the foci, axes, directrix, etc.; also draw a tangent to some point in the curve.

3. Find by graphic construction, the centre of gravity of the segment of a circle, radius 3 inches. The length of the chord is 5·7″. (Scale, full size.)

4. From the given indicator diagram and data calculate the horsepower (graphically).

II.—SOLID GEOMETRY.

1. Draw the projections of a perpendicular let fall from the point *C* upon the given line *AB*.

2. An ink-bottle is in the form of a truncated octagonal pyramid. Side of base 2″, of upper section $1\frac{1}{2}$″, height 3″, diameter of pot 1″, depth $1\frac{1}{2}$″.

The lid is an octagonal prism, depth 1″, side $1\frac{1}{2}$″. Make an Isometric projection when the lid is opened through 110°, on its hinge.

SECOND PAPER.

THURSDAY, *6th April* 1899.—2 *to* 5 P.M.

Make a carefully finished drawing of *either* of the following from the dimensioned sketch supplied:—

(*a*) Locomotive crosshead.

(*b*) Valve for Water Main.

DYNAMICS.

TUESDAY, *4th April* 1899.—2 *to* 5 *o'clock.*

1. What is the instantaneous centre of rotation?

If two points A and B in a disc move along fixed straight lines with accelerations a and b, prove that the apparent acceleration of the centre of instantaneous rotation is $\sqrt{(a^2+b^2-2ab\cos\alpha)}/\sin\alpha$ where α is the angle between the lines.

2. Find expressions for the normal and tangential accelerations of a point moving in a curve.

A particle moves in a smooth tube in the form of a plane closed curve under the influence of (1) a force tending to a fixed point in the plane of the curve and depending only on the distance from that point; (2) a force perpendicular to this and proportional to the distance from the fixed point. Find the total increase in energy in terms of the area of the curve after one complete revolution of the particle.

3. Explain a Funicular Polygon.

Employ it to find graphically all the forces in the case of 5 light rods AB, BC, CD, DA, BD jointed together and supported at A and B while a weight hangs from C.

4. Show that, the resistance of the air being neglected, all the points that can be reached by a gun of given muzzle velocity lie within a certain parabola. Thence find the difference between the distances at which a gun on a hill can hit a gun of equal power on the plain, and vice versa.

If the resistance of the air vary as the square of the speed, and the trajectory be treated as horizontal, find how the speed falls off with the distance traversed.

5. Define Young's Modulus, and show how it enters into the problem of the bending of a beam.

Find its value in terms of the rigidity and the resistance to compression.

6. Analyse the strain

$$\left.\begin{aligned} x' &= \cdot 84x + \cdot 12y \\ y' &= \cdot 12x + \cdot 91y \\ z' &= \cdot 85z \end{aligned}\right\}$$

into its isotropic and simple shear components. Find the principal axes of strain.

7. Show that the equation $\ddot{x} = -n^2x$ represents simple harmonic motion of a definite period. If the moving body is subject to a resistance directly as the speed, what other term must be introduced into the equation, and how is the form of the solution affected?

8. Define the terms Moment of Momentum and Moment of Inertia of a rigid body. Find their values in the case of a solid right cylinder of mass 50 lb., radius 1 foot, and angular speed 10 about its axis. Find the average value of the couple required to bring the cylinder to rest in 20 seconds.

9. Discuss the general problem of the catenary; in particular, find the form of the curve when the chain is uniform.

The two ends of a uniform wire of given length are kept at the same level and are drawn apart until the tension of the lowest point of the wire is 100 times the weight of the wire. Find, approximately, the ratio of the sag to the stretch.

10. Form the equation of motion of a rigid body about a fixed horizontal axis under the action of its own weight. About what axes is the period of small oscillations a minimum? Show that for any other possible period the axis of suspension must be at one of two definite distances from the centre of mass.

11. Given oblique stresses on two mutually perpendicular planes, prove that there are always two planes on which the stress is wholly normal.

Draw the ellipse of stress for the case $P = 300$, $Q = 200$, and find the position of the plane on which the stress is 250.

12. A sphere, without rotation, impinges obliquely on a rough plane. Find the final linear and angular velocity in terms of the original speed, the angle of impact, and the coefficient of restitution.

GEOLOGY.

TUESDAY, *28th March* 1899.—1 *to* 3 *o'clock.*

1. Give the distinguishing characters of Quartz, Orthoclase, Muscovite, and Augite.

2. Name the essential minerals occurring in the following rocks:—Granite, Diorite, Dolomite, Marble, Serpentine, and Common Basalt.

3. Define the following terms:—Slickensides, Bomb, Septarian Nodule, Fan-shaped structure, Quaquaversal dip, Overlap, and Foliation.

4. Draw *one* section showing the following structures:—Unconformity, Horizontal Strata, Anticline and Syncline, Outlier, Inlier, Dyke, Normal Fault.

5. Describe two Chemically-formed, two Organically derived, and two Igneous rocks.

Public Health.

MEDICINE.

THURSDAY, *6th April* 1899.—10 *to* 12 *o'clock.*

I. PNEUMONIA.

On what grounds is Pneumonia believed to be infectious? What are the conditions favourable to the spread of the disease? What measures are best fitted to arrest its spread?

II. Epidemic Diarrhœa of Children.

State as regards this disease—

(1) Age Incidence.
(2) Seasonal Incidence.
(3) Symptoms.
(4) Average duration of fatal cases.

Discuss fully Balard's views as to its cause.

III. Tetanus.

Describe the bacillus of Tetanus. Explain how it produces the disease in the human subject. What is its natural habitat? How is it implanted in the tissues?

SANITARY LAW.

Thursday, *6th April* 1899.—1 *to* 3 *o'clock.*

I. Refuse Removal.

A rural district Council, with jurisdiction over a number of parishes with populations varying from 200 to 3500, is discussing the question whether they should impose on the owners or occupiers the removal of refuse and the cleansing of privies, ashpits, etc., by means of bye-laws under Section 44 of the Public Health Act (England) 1875, or should themselves by one or other of the two methods laid down in Section 42 of that Act. State the considerations you would keep in view in advising as to this matter in one or another portion of the district.

II. Vaccination Act.

Explain in detail the provisions of the Vaccination Act 1898. Forecast the probable operation of this Act.

III. Inspection of Dairies.

What are the duties of the Medical Officer of a district under

Sections 60 and 61 of the Public Health Act (Scotland) 1897 when he has evidence that any person in the district is suffering from an infectious disease attributable to the milk supplied from a dairy

(*a*) within the district?
(*b*) without the district?

VITAL STATISTICS.

THURSDAY, 6*th April* 1899.—4 *to* 6 *o'clock.*

I. Discuss the principles laid down by Malthus regarding the increase of the population, and show the fallacies that underlie them.

II. What facts should be brought out in a properly conducted census enumeration of the population?

III. How is the standard death-rate and the corrected death-rate of a town determined? In what circumstances will the former be (1) greater, and (2) less, than the latter?

SANITATION.

FRIDAY, 7*th April* 1899.—10 *to* 12 *o'clock.*

I.—SEWAGE DISPOSAL.

(*a*) Describe what is known as the "Septic-tank" process of Sewage disposal.

(*b*) Discuss the chemical and biological principles involved in the method.

(*c*) Contrast the effect produced on Sewage by the "Septic-tank" with that resulting from chemical precipitation.

II.—OFFENSIVE TRADES.

1. Give the general principles which would guide you in framing measures for preventing nuisance arising from offensive trades, which deal with substances of animal origin.

2. Describe the trade processes carried on in the business of (*a*) a tanner, (*b*) a fellmonger, (*c*) a leather dresser; and point out the special point or points in each of these trade processes where nuisance is most likely to occur.

III.—Disposal of the Dead.

What proof is there that inhumation, as generally carried out, is an insanitary method of disposal of the dead? Under what circumstances (if any) should cremation be adopted?

PRACTICAL SANITATION AND DRAWING.

Friday, 7*th April* 1899.—1 *to* 4 *o'clock.*

Question 5 is imperative on Candidates who are under the Old Regulations; for Candidates under the New Regulations it is optional. Those who do not attempt it will be expected to attain a higher standard of work than otherwise, in respect of the sketches and diagrams required in illustration of the remaining questions.

1. Supposing you were asked to report on the best way of dealing with the sewage of a certain town, state as to what points in particular you would deem it necessary to procure full information before expressing an opinion, and why.

2. Under what conditions would you recommend the adoption of the egg-shaped, in preference to the circular, section for a sewer? Mention the usual proportions employed in setting out the former, and sketch the cross section of a complete sewer of the shape in question, built in two rings of brickwork. Name also the chief materials used in the work, and say generally how the quality of each may be tested.

3. State how you would make an examination of the state of ventilation of a large apartment (*e.g.* a Hospital Ward). Describe the instruments you would employ, and also give an account of the general character of the calculations upon which you would base your report.

4. Sketch a figured vertical cross section of a filter-bed for water. Describe the different materials used, and mention the part each is supposed to play in the filtration process. State also the number of gallons per square yard of surface that can, in ordinary cases, be effectually filtered in 24 hours.

5. From the figured sketch supplied (a Footpath Ventilator), make the drawings indicated.

NOTE.—*In order to gain full credit, answers must be freely illustrated by sketches or diagrams.*

Agriculture.

AGRICULTURE.

FRIDAY, 31*st March* 1899.—9 *to* 12 *o'clock.*

1. A farmer has just taken a 200-acre holding, consisting of superior tillage land, conveniently situated within ten miles of Edinburgh. What general system of farming would you recommend him to adopt?

Give (*a*) the rotation best adapted for the successful carrying out of your system, (*b*) the kinds, numbers, and values of the necessary live-stock; (*c*) the number of labourers and their wages; (*d*) the approximate amount of the ingoing valuations, with details for each item.

Make a summary of all the initial expenses, and show what capital the tenant will require.

2. Prepare an estimate of the quantities of artificial manures that would be necessary for the above farm. Give the percentages of the valuable ingredients which you would expect to have guaranteed, and also the price which you would be prepared to pay for each manure.

3. I wish to lay down 20 acres of stiff moist soil to permanent grass. Give me full directions for doing so, more especially as

regards the following points—(*a*) preparatory crops and tillage; (*b*) selection of species and sowing; (*c*) treatment of the land for the first three years.

Estimate the expenditure on, and the receipts from the grass in the first three seasons.

4. Describe fully the characteristics of the breed of cattle *or* of sheep with which you are best acquainted, and give an account of the management of a breeding herd *or* flock.

5. Explain the objects of the ordinary processes adopted in the manufacture of Cheddar cheese. What is your opinion of the advisability or otherwise of employing "pure cultures" for butter and cheese-making in this country.

6. Write a paper on one of the following subjects:—

(*a*) The qualities desirable in barley for malting purposes, and how they may be obtained.

(*b*) Cross-fertilization and the raising of new varieties of cereals.

AGRICULTURAL CHEMISTRY.

FRIDAY, 31*st March* 1899.—1 *to* 3 *o'clock.*

1. Describe shortly the various kinds of Nitrogenous compounds, other than Albuminoids, found in plants, give typical examples, and explain how you would prove the presence of Nitrogen in each of them.

2. What is meant by Humus? How does the presence of Humus in a soil affect its texture and fertility? How may the amount of Humus in a soil be increased or diminished?

3. Describe any qualitative tests that can be easily applied to determine the purity of (*a*) Bone Meal, (*b*) Ammonium Sulphate, (*c*) Linseed Cake.

4. What is Diastase? What functions does it perform in the

economy of plant life, in animal nutrition, and in brewing? Explain the circumstances in each case.

5. Explain the following terms:—Nutrient ratio, Potash depression, Root depression, Phosphatic reversion, Flocculation, Pasteurisation.

6. Describe the circumstances in which Caustic Lime may be advantageously applied to land under cultivation and in pasture, and explain its action in each case.

VETERINARY HYGIENE.

MONDAY, *27th March* 1899.—1 *to* 3 *o'clock.*

1. What is the pelvis? Name and describe in their relative positions the bones which form it.

2. Describe an incisor tooth of the horse, and state how you would distinguish a temporary from a permanent one?

3. Describe a case of "eversion of the uterus" in the cow. State its cause, and what measures you would adopt for its reduction to, and retention in, its proper position. State also what preventive measures you would adopt when it was likely to occur.

4. Describe the stomach of the horse, giving its average capacity.

5. State the causes of colic, and with the view of preventing same, state what system and rules you would adopt as regards watering and feeding stabled farm horses, and your reasons therefor.

6. Give the causes of, and the treatment and measures you would adopt for the prevention of abortion in the cow.

GEOLOGY.

TUESDAY, *28th March* 1899.—1 *to* 3 *o'clock.*

1. Mention some of the various ways in which Limestone has been formed.

2. Define the following terms—Escarpment, Intrusive Sheet or Sill, Neck, Reversed Fault, Slaty cleavage, and Overlap.

3. What are Geysers?

4. In selecting a site for a Sewage-field, what are the principal geological considerations to be kept in view, in order to avoid the possible pollution of wells, etc.?

5. Draw *one* section to show the following structures—Horizontal Strata, Anticline and Syncline, Unconformity, and Normal Fault.

AGRICULTURAL ENTOMOLOGY.

THURSDAY, 6*th April* 1899.—9 *to* 11 *o'clock.*

1. What are the characters of the Order Diptera? What insects of the Order would you term "useful," and why?

2. Enumerate five common insect pests of either Apple-trees or Pine-trees, and classify them. Describe the life-history of one of them, and means for preventing its ravages.

3. Which do you consider the three worst enemies of the Turnip crop? Give a detailed life-history of any one of them, with preventive and remedial measures.

4. Define Coccidæ, Coccinellidæ, Heteroptera, Heterocera, Rhynchota, and Rhynchophora. Give two examples of each.

5. Name any *five* Insecticides, and say of each how it acts. What general principles would you bear in mind in operating against a Mandibulate Insect, as compared with a Haustellate Insect?

ECONOMIC SCIENCE.

Same as the First Paper for M.A.

FORESTRY.

THURSDAY, *6th April* 1899.—11.30 A.M. *to* 1.30 P.M.

(*Candidates have the option of answering questions* 3 *or* 5.)

1. Indicate conditions under which it might be advisable to establish a Larch wood by artificially-sown seed. Give a description of the preparation of the land, and the method of putting in the seed. State the quantity of seed required per acre, in the case of the Larch, Scots Pine, Oak, Birch, and Spanish Chestnut.

2. What are the advantages of natural regeneration on the Shelter Wood Compartment System? For which species of trees is the system best adapted? Describe the general method of procedure, from the time that the mature close wood is taken in hand, till the work of regeneration is complete.

3. What change in growth will result from making an extra strong felling in a dense Beech wood that is approaching maturity? What are the causes of such change? Assuming that the breadth of the wood-rings before thinning averages $\frac{1}{10}$ inch four feet from the ground, and $\frac{1}{8}$ inch immediately below the crown, what relative and absolute breadths at these points might you expect after thinning?

4. How would you conduct the thinning of a High Forest of Spruce, at successive stages of growth, if your object were to produce a heavy crop of high-class timber? Give reasons.

5. Describe some of the mechanical means employed to facilitate and cheapen the conveyance of timber from forests to sale-depots.

6. What measures might be taken, when forming woods, to protect them while under regeneration from injury by cold north and north-east winds; and subsequently by strong winds, such as, in most parts of Scotland, blow at certain seasons, chiefly from the opposite quarters? What conditions render strong winds specially dangerous to forests?

ENGINEERING FIELD-WORK.

TUESDAY, *4th April* 1899.—3 *to* 5 P.M.

1. A field, measured on a 25″ Ordnance Map, has an area of 500 square inches. What is the acreage?

2. The acreage of a small estate is said to be 88 A. 2 R. 28 P.; but it is found that the chain employed in the measurement was 1·98 inches too long. Calculate the extent of the error thus occasioned.

3. Give a sketch of a Vernier reading ·28 inches, on a scale divided to 10ths of an inch.

4. Describe the various methods of traversing, and explain the purposes for which they are severally used.

AB is a measured Base line of 4523 feet, the angle $BAC = 53°, 23', 20''$, and $ABC = 85°, 48', 30''$. D is a point in AB, beyond B, and $CDB = 28°, 30'$. Find the whole length AD.

5. Describe, by means of a diagram, the mode of adjusting the bubble-tube in a Dumpy level.

6. Using the following data, fill in and check a note-book:—Section *A*, sights are taken on points of which the distances are 100, 200, 300, 400 links, and the reduced levels are respectively 152·35, 154·72, 160·38, 163·53; the level is then moved, so that the line of collimation is raised 6 feet, and sights are taken on the point at 400, and a point at 430, of which the reduced level is 165·23, the reading on the last point being 5·77.

NOTE.—*Answers should, as far as possible, be illustrated by sketches or diagrams.*

Papers for Degree of B.D.

DEPARTMENT I.

HEBREW.

TUESDAY, *28th March* 1899.—10 *to* 1 *o'clock.*

A.

1. Point:—

ויקח גדעון עשרה אנשים מעבדיו ויעש כאשר דבר
אליו יהוה ויהי כאשר ירא את־בית אביו ואת־אנשי
העיר מֵעשות יומם ויעש לילה: וישכימו אנשי העיר
בבקר והנה נתץ מזבח הבעל והאשרה אשר־עליו כָּרֻתָה
ואת הפר השני העלה על־המזבח הבנוי: ויאמרו איש
אל־רעהו מי עשה הדבר הזה וידרשו ויבקשו ויאמרו
גדעון בן־יואש עשה הדבר הזה: ויאמרו אנשי העיר
אל־יואש הוצא את־בנך וימת כי נתץ את־מזבח הבעל
וכי כרת האשרה אשר־עליו:

2. Translate:—

וַיְהִי־אִישׁ מֵהַר־אֶפְרַיִם וּשְׁמוֹ מִיכָיְהוּ: וַיֹּאמֶר לְאִמּוֹ אֶלֶף וּמְאָה הַכֶּסֶף
אֲשֶׁר לֻקַּח־לָךְ וְאָתְּי אָלִיתְּי וְגַם אָמַרְתְּ בְּאָזְנַי הִנֵּה־הַכֶּסֶף אִתִּי אֲנִי לְקַחְתִּיו
וַתֹּאמֶר אִמּוֹ בָּרוּךְ בְּנִי לַיהוָה: וַיָּשֶׁב אֶת־אֶלֶף־וּמְאָה הַכֶּסֶף לְאִמּוֹ וַתֹּאמֶר
אִמּוֹ הַקְדֵּשׁ הִקְדַּשְׁתִּי אֶת־הַכֶּסֶף לַיהוָה מִיָּדִי לִבְנִי לַעֲשׂוֹת פֶּסֶל וּמַסֵּכָה
וְעַתָּה אֲשִׁיבֶנּוּ לָךְ: וַיָּשֶׁב אֶת־הַכֶּסֶף לְאִמּוֹ וַתִּקַּח אִמּוֹ מָאתַיִם כֶּסֶף וַתִּתְּנֵהוּ
לַצּוֹרֵף וַיַּעֲשֵׂהוּ פֶּסֶל וּמַסֵּכָה וַיְהִי בְּבֵית מִיכָיְהוּ:

3. Give the etymology and signification of מיכיהו, also the syntax of the last two words of verse 1, and the last three of verse 2. Explain the Kethib-forms in the latter verse. Distinguish between the following pairs of words: גַּת and יֶקֶב; פֶּסֶל and מַסֵּכָה; שׁוֹפָר and חֲצֹצְרָה.

4. Write a short note on each of the following:—(*a*) אֲשֵׁרָה; (*b*) אֵפוֹד; (*c*) the so-called "pre-Deuteronomic" book of Judges.

5. Translate either of the two following extracts:—

(*a*) תִּקְעוּ שׁוֹפָר בְּצִיּוֹן קַדְּשׁוּ־צוֹם קִרְאוּ עֲצָרָה: אִכְּפוּ־עָם קַדְּשׁוּ קָהָל 1, 2
קִבְצוּ זְקֵנִים אִסְפוּ עוֹלְלִים וְיוֹנְקֵי שָׁדָיִם: יֵצֵא חָתָן מֵחֻפָּתוֹ וְכַלָּה מֵחֻפָּתָהּ 3
מְשָׁרְתֵי יְהוָה וְיֹאמְרוּ חוּסָה יְהוָה עַל־עַמֶּךָ וְאַל־תִּתֵּן נַחֲלָתְךָ לְחֶרְפָּה
לִמְשָׁל־בָּם גּוֹיִם לָפָּה יֹאמְרוּ בָעַמִּים אַיֵּה אֱלֹהֵיהֶם: וַיְקַנֵּא יְהוָה לְאַרְצוֹ 4
וַיַּחְמֹל עַל־עַמּוֹ:

Or:

(*b*) כִּי הִנֵּה בַיָּמִים הָהֵמָּה וּבָעֵת הַהִיא אֲשֶׁר אָשׁוּב אֶת־שְׁבוּת יְהוּדָה 3, 5
וְיִרוּשָׁלִָם: וְקִבַּצְתִּי אֶת־כָּל־הַגּוֹיִם וְהוֹרַדְתִּים אֶל־עֵמֶק יְהוֹשָׁפָט וְנִשְׁפַּטְתִּי 6
עִמָּם שָׁם עַל־עַמִּי וְנַחֲלָתִי יִשְׂרָאֵל אֲשֶׁר פִּזְּרוּ בַגּוֹיִם וְאֶת־אַרְצִי חָלָקוּ:
וְאֶל־עַמִּי יַדּוּ גוֹרָל וַיִּתְּנוּ הַיֶּלֶד בַּזּוֹנָה וְהַיַּלְדָּה מָכְרוּ בַיַּיִן וַיִּשְׁתּוּ: 7

6. Parse הוכה (verse 2), יונקי (verse 2), הורדתים (verse 6), ידו (verse 7), giving the third sing. impf. Qal of the second and third. Criticise the A. V. rendering "rule over them" in verse 3. Write a note on שׁוּב שְׁבוּת.

7. Discuss briefly the bearing of the above extracts on the date of the book of Joel.

8. Translate:—

בֹּאוּ בֵית־אֵל וּפִשְׁעוּ הַגִּלְגָּל הַרְבּוּ לְפַשְׁעַ וְהָבִיאוּ לַבֹּקֶר זִבְחֵיכֶם לִשְׁלֹשֶׁת 1

2 יָמִים מַעֲשְׂרֹתֵיכֶם׃ וְקַטֶּר מֻחְמִין תּוֹדָה וְקִרְאוּ נְדָבוֹת הַשְׁמִיעוּ כִּי כֵן
3 אֲהַבְתֶּם בְּנֵי יִשְׂרָאֵל נְאֻם אֲדֹנָי יֱהוִה׃ וְגַם אֲנִי נָתַתִּי לָכֶם נְקִיוֹן שִׁנַּיִם
4 בְּכָל־עָרֵיכֶם וְחֹסֶר לֶחֶם בְּכֹל מְקוֹמֹתֵיכֶם וְלֹא־שַׁבְתֶּם עָדַי נְאֻם־יְהוָה׃ וְגַם
אָנֹכִי מָנַעְתִּי מִכֶּם אֶת־הַגֶּשֶׁם בְּעוֹד שְׁלֹשָׁה חֳדָשִׁים לַקָּצִיר וְהִמְטַרְתִּי
עַל־עִיר אֶחָת וְעַל־עִיר אַחַת לֹא אַמְטִיר חֶלְקָה אַחַת תִּפּוֹטֵר וְחֶלְקָה אֲשֶׁר־
לֹא־תַמְטִיר עָלֶיהָ תִּיבָשׁ׃

9. How may תַּמְטִיר in 4 *b* be syntactically defended? What emendation does the LXX ἐφ' ἣν οὐ *βρέξω* suggest? Write an exegetical note on the first two verses of the extract.

B.

I.—Translation into Hebrew.

1. (*a*) As we were conversing, the man entered and saluted us.

(*b*) I did not intend to kill him.

(*c*) The king's sons and daughters entered their father's presence.

2. Next morning Abimelech marched against Têbêṣ, and after some days' siege captured the town. Inside was a strong tower, to which many of the inhabitants fled. They shut themselves in and took up their position on the roof. Abimelech soon reached the tower and attacked it. As he advanced close to the door, with the intention of setting it on fire, a woman threw an upper millstone on his head and shattered his skull. Abimelech hastily called his attendant armour-bearer, and bade him draw his sword and kill him, that it might not be said of him that a woman accomplished his death. On this the attendant ran him through with his sword, and so he died.

II.—Psalms (Book v.).

1. (*a*) Translate:—

אוֹדְךָ בְכָל־לִבִּי נֶגֶד אֱלֹהִים אֲזַמְּרֶךָּ׃ אֶשְׁתַּחֲוֶה אֶל־הֵיכַל קָדְשְׁךָ וְאוֹדֶה
אֶת־שְׁמֶךָ עַל־חַסְדְּךָ וְעַל־אֲמִתֶּךָ כִּי־הִגְדַּלְתָּ עַל־כָּל־שִׁמְךָ אִמְרָתֶךָ׃ בְּיוֹם
קָרָאתִי וַתַּעֲנֵנִי תַּרְהִבֵנִי בְנַפְשִׁי עֹז׃ יוֹדוּךָ יְהוָה כָּל־מַלְכֵי־אֶרֶץ כִּי שָׁמְעוּ
אִמְרֵי־פִיךָ׃ וְיָשִׁירוּ בִּדְרָכֵי יְהוָה כִּי־גָדוֹל כְּבוֹד יְהוָה׃ כִּי־רָם יְהוָה
וְשָׁפָל יִרְאֶה וְגָבֹהַּ מִמֶּרְחָק יְיֵדָע׃ אִם־אֵלֵךְ בְּקֶרֶב צָרָה תְּחַיֵּנִי עַל אַף
אֹיְבַי תִּשְׁלַח יָדֶךָ וְתוֹשִׁיעֵנִי יְמִינֶךָ׃ יְהוָה יִגְמֹר בַּעֲדִי יְהוָה חַסְדְּךָ לְעוֹלָם
מַעֲשֵׂי יָדֶיךָ אַל־תֶּרֶף׃

(*b*) Explain the forms אזמרך (verse 1), אשתחוה (verse 2), חסדך (verse 2), כל (verse 2), יידע (verse 6), תרף (verse 8).

(*c*) Write exegetical notes on נגד אלהים (verse 1) and כי הגדלת על־כל־שמך אמרתך (verse 2).

2. (*a*) Discuss and emend the text of:—

(*a*) רַבַּת יַשְׂבִּיעָה־לָּהּ נַפְשֵׁנוּ הַלַּעַג הַשַּׁאֲנַנִּים הַבּוּז לִגְאֵיוֹנִים׃

Sept., . . . τὸ ὄνειδος τοῖς εὐθηνοῦσιν καὶ ἡ ἐξουδένωσις τοῖς ὑπερηφάνοις. ° K^{e}rê לִגְאֵי יוֹנִים

(*b*) הֲדַר כְּבוֹד הוֹדֶךָ וְדִבְרֵי נִפְלְאוֹתֶיךָ אָשִׂיחָה׃

וְעֹזּוּז נוֹרְאוֹתֶיךָ יאמֵרוּ וּגְדֻלָּתְךָ אֲסַפְּרֶנָּה׃

Sept., καὶ τὴν μεγαλοπρέπειαν τῆς δόξης τῆς ἁγιωσύνης σου λαλήσουσιν . . . ° K^{e}rê וּגְדֻלָּתְךָ

(*b*) Translate the Hebrew as emended.

(*c*) Discuss the meaning of the Psalm headings—

לַמְנַצֵּחַ. שִׁיר הַמַּעֲלוֹת

III.—History.

1. Describe the circumstances of the Assyrian invasions of Tiglathpileser, Shalmaneser IV., and Sennacherib. Give dates.

2. Write short historical notes on: Manasseh, Micah, Battle of Megiddo.

3. Sketch the history of Jeremiah's attitude to the religion and politics of his time.

APOLOGETICAL THEOLOGY.

Tuesday, 28*th March* 1899.—2 *to* 5 *o'clock.*

A. The Relations of Philosophy and the Positive Sciences to Theology.

1. Define Philosophy, Science, and Theology, differentiating the characteristic aim of each; and state briefly their interrelations. "Religious doctrine has always been a changing and growing thing, and has always reflected the intellectual and philosophical movements of the age." Illustrate the above statement by reference to outstanding epochs in the history of doctrine.

2. Indicate the causes of the strain between Theology and Modern Science.

Give considerations to justify the affirmation that Science has contributed powerfully to the aid of theistic belief.

3. Consider how far the established results of Science affect the teachings of Scripture. Remark on the following statement:—"Scientific methods are entirely distinct from those by which our religious beliefs are formed, yet they are the sole methods on which we are justified in forming any belief."

4. Show how Philosophy was enlisted in defence of Christianity in the early Church, and explain how it may still be employed in the service of Christian Theology.

B. Christianity and Morality.

1. State with precision wherein religion and morality are
   (*a*) inter-dependent;
   (*b*) independent of each other; and
   (*c*) both alike dependent on a higher source.

Discuss the question of the sufficiency and superiority of purely ethical culture.

2. State fully the argument for Christianity founded on
   (*a*) the characteristics of Christ as The Teacher;
   (*b*) the characteristics of His Teaching;
   (*c*) the Existence of the Church.

In what respects has the character of Christ been impeached by critics?

3. Carefully explain how far the morality of Jesus was original; and indicate in what respects His ideal of virtue and conduct may be regarded as superior to the Platonic, Aristotelian, Stoic, and Roman ideals.

4. State in a general and comprehensive way your views as to the nature and extent of the relation between religion and morality, and as to the significance and bearing of the teaching of Christ with regard to it.

C. Christianity compared with the Ethnic Religions.

1. Enumerate the chief points which, in a scientific comparison of Christianity with other religions, appear to constitute its distinctive character.

2. May Christianity be legitimately regarded as a stage in the evolution of religion, and at the same time as the absolute religion? If so, explain why.

3. On what grounds would you maintain the superiority of Christianity to Brahminism, Buddhism, and Confucianism?

4. Compare and contrast the Christian Doctrine as to *a*

Future with the Doctrines on the same subject of any two of the Ethnic Religions.

DEPARTMENT II.

ECCLESIASTICAL HISTORY.

WEDNESDAY, *29th March* 1899.—10 A.M. *to* 1 P.M.

1. What were the influences which helped to shape the developed Catholicism of the fifth century?

2. State the theory of the Episcopate held by (1) Ignatius; (2) Irenaeus; and (3) Augustine.

3. What benefits were conferred upon the Church by the Emperors Gratian, Theodosius I., Honorius, and Theodosius II., respectively?

4. Account for the Emperor Constantine's zeal for unity and uniformity.

5. Delineate the sytem of S. Augustine; and exhibit its relation to the preceding and subsequent development of doctrine.

6. Contemplating Arianism in the light of the age in which it arose and spread—what are its merits?

7. State the Nicene Creed.

8. Describe the Easter Cycle of Festivals.

9. State and comment on the motives which led to the worship of

(*a*) the Virgin Mary;
(*b*) the Angels;
(*c*) Images;
(*d*) Relics.

10. Describe and estimate the influence on the fortunes of the Scottish Church of Andrew Melville, Archbishop Laud, and the Westminster Assembly.

11. What line of Protestant Apology was adopted by Dr. John Forbes of Corse?

Give the details of Archbishop Leighton's proposed compromise between Episcopacy and Presbytery.

12. Write notes on the "Altare Damascenum;" "Laud's Liturgy;" "The Whiggamore's Raid;" "The Five Articles of Perth."

13. Define and illustrate the attitude towards the Scottish Church of Charles II., James II., and William of Orange.

14. In what sense may it be said that "the establishment of Presbytery in 1690 was the work of the Scottish Bishops"?

SYSTEMATIC THEOLOGY.

WEDNESDAY, *29th March* 1899.—2 *to* 5 *o'clock.*

A. THE SOURCES OF CHRISTIAN DOCTRINE AND THE PLACE, FUNCTIONS, METHOD, AND HISTORY OF CHRISTIAN DOGMATICS.

1. By what method are Christian conceptions to be dogmatically determined?

Explain Ritschl's "Value judgments," and their place in his theological method.

In the history of Dogmatic, what use has been made of the Speculative Method?

2. What is the nature of Christian Certainty? and what is the seat of authority in religion? Estimate the importance and explain the right use of Holy Scripture as a source of doctrine.

3. Sketch the history of the terms "dogma" and "dogmatics." Remark on Harnack's use of the term "dogma."

4. How is Christian Dogmatics related to Apologetical and Historical Theology?

B. Christology.

1. What is the principle of the Incarnation? What objections have been taken to it? and how is it affected by the theory of Kenosis? What dogmatic significance attaches to the pre-existence, virgin birth, forty days' fasting, and ascension of Christ?

2. Compare and contrast the Christological doctrine
of St. John and the Synoptics,
or, of St. Paul and the original apostles.

3. Describe Ebionism; trace its natural genesis to the fundamental principle of Judaism; explain its hostility to Paulinism; and exhibit the reappearance of its tendency in the theology of Paul of Samosate, in Adoptionism, and in Modern Humanitarianism.

4. Is any form of the Kenotic Theory altogether acceptable? Give reasons for your answer.

C. Soteriology.

1. Enumerate the main features of the New Testament doctrine respecting the Atonement. In what sense may it be said that "Christ is the ideal of humanity or the representative man"? Appraise the following statement: "The Fall carried with it the certainty that this ideal must be expressed under painful conditions."

2. Define the "anger of God" as to—
(*a*) its analogy to human anger;
(*b*) its essential nature;
(*c*) its relation to sin.
Relate Forgiveness to—
(*a*) the character of the Father;
(*b*) the death of the Son;
(*c*) the work of the Spirit.

3. Explain fully the way in which man participates in the

atoning acts of Christ, and describe the nature and forms of the work of the Holy Spirit in redemption.

4. State what different views have been taken as to the extent of the Atonement, and indicate the reasons which have been given for them. Remark on the following statement: "What the Westminster Confession says is that the redemption which results in salvation is for the elect only. Dr. Cunningham says this would be stating a mere truism, but it is just such a truism as needs to be stated, which also holy Scripture condescends to state repeatedly and expressly."

BIBLICAL CRITICISM.

THURSDAY, 30*th March* 1899. 10 *to* 1 *o'clock.*

1. Give an account of the date, contents, and characteristics of *C*, *D*, *L*, *P* (Porphyr.) T, Δ, Ξ, 33.

2. Sketch the history and characteristics of the Latin Bible previous to the work of Jerome, and attach notes to *a*, *b*, *c*, *k*.

3. Explain and comment on the critical theory of Westcott and Hort.

4. Particularise the services rendered to New Testament criticism by Ximenes, Mill, Bentley, Griesbach, Lachmann.

5. Discuss the attitude of the eighth century prophets to the institution of sacrifice.

6. What may be inferred from the early prophets regarding the "covenant relation" expressed in the Torah?

7. Quote from Amos *or* Hosea passages which may be held to show acquaintance with the Pentateuch. Comment on their evidential value.

8. Exemplify from Haggai and Joel the alleged greater dependence of the later prophets on the Torah. Comment on the facts.

9. Examine the place occupied by "heathen" elements in the religion of Israel.

10. Consider the "law of the central sanctuary" in its relation to the three codes of the Torah and to history.

11. Examine the evidence for determining the date of Deuteronomy.

12. Discuss the witness of the New Testament to the Old Testament, and its relation to critical questions.

13. "Basilides knew, quoted, and commented upon John's Gospel about the end of the first quarter of the second century." Illustrate this statement.

14. "Justin Martyr attributes sayings to our Lord which are not found in the Gospels, and narrates events which are either not mentioned by the Evangelists or recorded by them with serious variations from his accounts." Criticise this statement, and exhibit the nature and extent of the witness of Justin to the Canonical Gospels.

15. By what arguments does Eusebius seek to demonstrate the good faith of the writers of the Gospels?

16. Translate and comment on :—

(*a*) *ὁποία οὖν ἡ πραγματεία τοῦ υἱοῦ τοῦ θεοῦ, τοιαύτη καὶ τῶν ζώων ἡ μορφή· καὶ ὁποία ἡ τῶν ζώων μορφή, τοιοῦτος καὶ ὁ χαρακτὴρ τοῦ εὐαγγελίου. τετράμορφα γὰρ τὰ ζῶα, τετράμορφον καὶ τὸ εὐαγγέλιον, καὶ ἡ πραγματεία τοῦ κυρίου.*

(*b*) *ὁ μέντοι γε πρότερος αὐτῶν ἀρχηγὸς ὁ Τατιανὸς συνάφειάν τινα καὶ συναγωγὴν οὐκ οἶδ' ὅπως τῶν εὐαγγελίων συνθεὶς τὸ διὰ τεσσάρων τοῦτο προσωνόμασεν· ὃ καὶ παρά τισιν εἰσέτι νῦν φέρεται.*

(*c*) In summa, si constat id verius quod prius, id prius quod et ab initio, id ab initio quod ab apostolis, pariter utique constabit, id esse ab apostolis traditum quod apud ecclesias apostolorum fuerit sacrosanctum. Videamus quod lac a Paulo Corinthii hauserint, ad quam regulam Galatae sint recorrecti,

quid legant Philippenses, Thessalonicenses, Ephesii; quid etiam Romani de proximo sonent, quibus evangelium et Petrus et Paulus sanguine quoque suo signatum reliquerunt. Habemus et Joannis alumnas ecclesias. Nam etsi Apocalypsin ejus Marcion respuit, ordo tamen episcoporum ad originem recensus in Joannem stabit auctorem. Sic et caeterarum generositas recognoscitur. Dico itaque apud illas, nec solas jam apostolicas, sed apud universas, quae illis de societate sacramenti confoederantur, id evangelium Lucae ab initio editionis suae stare, quod cum maxime tuemur: Marcionis vero, plerisque nec notum; nullis autem notum, ut non eadem damnatum.

Papers for Degrees in Law (LL.B. and B.L.)

SCOTS LAW.

MONDAY, *20th March* 1899.—9 A.M. *to* 1 P.M.

(THREE *questions in each group to be answered.*)

I.

1. Describe the grounds of nullity of marriage.

2. In what circumstances, and by whom, may a pupil's guardian be appointed without the intervention of a Court?

3. Explain the law of election between legal rights and testamentary provisions.

4. When may, and when may not, the termination of a family trust be accelerated?

II.

1. What rules obtain regarding the liability of participants in a wrong?

2. Explain the doctrine of tacit relocation of a lease.

3. Describe the sexennial prescription.

4. What restrictions are imposed by statute on the exercise of a right of (1) salmon fishing, and (2) trout fishing?

III.

1. In marine insurance explain the warranties implied, and some of those commonly expressed.

2. State and illustrate the rule regarding contracts in restraint of trade.

3. What is the operation of the Edict in respect to innkeepers, and how has it been modified by statute?

4. Describe the doctrine of stoppage *in transitu*. Who may exercise the right, and how?

IV.

1. In what circumstances may a bankrupt be refused his discharge; and when, and to what effect, may a creditor of his be penalised for participation?

2. What is the purpose of the Memorandum and Articles of Association respectively of a Limited Liability Company? How far may these be altered after registration?

3. State the law with reference to a wife giving evidence for, or against, her husband.

4. What offences are struck at by the Night Poaching Acts?

CONSTITUTIONAL HISTORY AND LAW.

FIRST PAPER.

MONDAY, 20*th March* 1899.—2 *to* 4 P.M.

(SIX *questions only to be answered.*)

1. To what early institutions does the British Constitution trace its origin?

2. State the origin and sketch the history of "benefit of clergy."

3. Mention and explain the chief constitutional provisions of the Great Charter.

4. What was the composition of the Parliament of 1295, and what were its prototypes?

5. "Henry IV. allied himself with the Church and reigned constitutionally." Discuss.

6. State the chief causes of the English Reformation (from Wycliffe to Cranmer).

7. Explain briefly the attitude of Queen Elizabeth towards the Roman Catholics and towards the Puritans.

8. What was the Stuart doctrine of the kingship, and how was it repudiated by the nation?

9. Explain in outline the nature of the "Revolution Settlement" (1689-1701).

10. Sketch the history of either (*a*) Religious Emancipation, or (*b*) Cabinet Government, or (*c*) Parliamentary Reform.

11. Explain and discuss *three* of the following cases: Haxey; Thorpe; Strode; Ferrers; Sir John Eliot; Hampden; Wilkes.

12. Write a short biography of *one* of—Simon de Montfort; Wycliffe; the elder or the younger Pitt; Edmund Burke.

SECOND PAPER.

TUESDAY, 21*st March* 1899.—2 *to* 4 P.M.

(SIX *questions only to be answered.*)

1. Review the causes of the American Revolution (1763-76), and explain the chief issues at stake.

2. Sketch the constitutional history of Virginia, or that of Massachusetts, or that of Connecticut, during the colonial period.

3. Describe the making of the U. S. A. constitution (1787).

4. (*a*) Summarise the outstanding provisions of the U. S. A. constitution. Or (*b*) mention and discuss its chief peculiarities.

5. Sketch the constitutional history of Hungary (1222-1867) or that of Switzerland (1291-1874), or that of France (1789-1884), or that of Germany (1815-1871).

6. Define a constitution in the modern sense of the term. How may constitutions be classified?

7. (*a*) What are the salient features of the present French constitution? (*b*) Describe briefly the French system of local government.

8. Summarise and criticise the constitution of Prussia, or that of the German Empire.

9. What, generally, is the nature of the federal government of Switzerland?

10. Explain and discuss the doctrines of the Initiative and the Referendum, as practised in Switzerland.

11. Contrast in a few essential points the British, American, French, and German (Imperial) polities.

12. Discuss shortly *three* of the following topics:—Sovereignty of the people; Sovereignty of the state; Over-democratisation; Paternal democracy; Republican monarchy; Essence of constitutionalism; Public and private law; Written constitutions.

CIVIL LAW.

TUESDAY, 21*st March* 1899.—9 *to* 1 *o'clock.*

A.—HISTORY.

(*All Candidates are expected to answer* FIVE *questions in this group.*)

1. Mention the chief constitutional results of the several Secessions of the Plebs.

2. What is known of the early forms of land-tenure at Rome?

3. Explain the procedure *per pignoris capionem.* In what cases was it competent?

4. Describe shortly the various purposes for which the transaction *per aes et libram* was employed.

5. Trace historically the Senate's power of influencing the Private Law.

6. From what sources were the *Institutes* of Justinian drawn? What method appears to have been followed by the compilers?

B.—Institute.

(*The first question must be answered by all Candidates: Candidates for M.A. or B.L. should attempt* six, *and Candidates for LL.B.* four *of the remaining questions.*)

1. Translate and comment on the following:—

(*a*) Emancipatos liberos jure civili neque heredes instituere neque exheredare necesse est, quia non sunt sui heredes.

(*b*) Restituta autem hereditate, is quidem, qui restituit, nihilo minus heres permanet; is vero qui recipit hereditatem, aliquando heredis aliquando legatarii loco habebatur.

(*c*) Item per acceptilationem tollitur obligatio.

(*d*) Actiones quas in usu veteres habuerunt legis actiones appellabantur; lege autem agebatur modis quinque.

2. Under what conditions could a *filiafamilias* be emancipated? What were the necessary formalities in the early and the later law?

3. Could a man lawfully marry (1) his brother's daughter; (2) his sister's daughter; (3) his first cousin; (4) his sister by adoption; (5) his deceased wife's sister?

4. Compare and contrast the *tutela* of the XII. Tables with that of Justinian's time.

5. Describe the origin of the tenure known as *emphyteusis*, and state shortly the rights and duties it involved.

6. What was the nature, form, and effect of a Pupillary Substitution?

7. What were the rules of the civil law as to the rights

of intestate succession (1) of adopted children; (2) of grandchildren by a daughter deceased? How were these rules subsequently modified?

8. Explain the leading points of distinction between *Mutuum* and *Commodatum.*

9. Indicate shortly some of the grounds on account of which stipulations might be invalid.

10. What proceedings could be taken by a man whose property was forcibly seized?

C.—Digest xviii. 1 and xix. 1.

(*To be answered by Candidates for LL.B.*)

1. Translate:—

(*a*) Inde quaeritur, si in ipso corpore non erratur, sed in substantia error sit, ut puta si acetum pro vino veneat, aes pro auro vel plumbum pro argento vel quid aliud argento simile, an emptio et venditio sit.

(*b*) Lucius Titius promisit de fundo suo centum milia modiorum frumenti annua praestare praediis Gaii Sei: postea Lucius Titius vendidit fundum additis verbis his "quo jure quaque condicione ea praedia Lucii Titii hodie sunt, ita veneunt itaque habebuntur": quaero, an emptor Gaio Seio ad praestationem frumenti sit obnoxius.

(*c*) Dominus fundi de praedio arbores stantes vendiderat et pro his rebus pecuniam accepit et tradere nolebat: emptor quaerebat, quid se facere oporteret.

How does the Digest answer the foregoing questions?

2. What is Eviction?

Summarise what is said as to the liability of the seller on that ground.

CONVEYANCING.

WEDNESDAY, 22*nd March* 1899.—9 *to* 1 *o'clock.*

(*Any* TWELVE *questions to be answered.*)

1. Discuss the privileges and limitations of holograph writings.

2. Explain the provisions of the Conveyancing Act, § 4 (1), abolishing renewal of investiture.

3. State the provisions of the Conveyancing Act, § 15, as to the redemption of casualties.

4. Deal historically and practically with the warrant of registration.

5. Discuss the Notice to treat under the Lands Clauses Act.

6. Explain the recent statutory provisions as to the real diligence of Inhibition.

7. Discuss the Writ of *Clare Constat.*

8. State how a real burden is constituted, transmitted, and extinguished.

9. Discuss the remedy of foreclosure now competent to the creditor in a Bond and Disposition in Security.

10. State the Law as to cash credit Bonds and Dispositions in Security.

11. Deal with the subject of intimation of assignations of moveable property.

12. How may a cautionary obligation be extinguished? In what circumstances is a cautionary obligation for interest more disadvantageous than an obligation for principal?

13. State the main points to be kept in view in framing an agreement for sale of a going business to a limited liability company.

14. Discuss the law of ancillary submissions as to the Arbiters and as to the subject-matter thereof.

15. Explain the peculiarities of an arbitration under the Lands Clauses Act.

FORENSIC MEDICINE.

WEDNESDAY, *2nd November* 1898.—2 *to* 4 *o'clock.*

1. A quantity of bones are found buried one foot under the surface of the soil. What points should be noted in connection with the identification of the remains?

2. What preparation of mercury is most commonly met with as a poison? What are its chief characteristics, and the symptoms produced?

3. Upon what grounds would you be entitled to conclude that a woman had been pregnant and recently delivered?

4. What is the distinction between death by Hanging and death by Strangulation, so far as the marks on the neck are concerned? Explain why it is that the marks are different.

5. In what ways may insanity be pleaded in defence?

6. To what extent has the plea that a person's mind has been weakened by continued alcoholic indulgence been given effect to?

GENERAL JURISPRUDENCE (PHILOSOPHY OF LAW).

THURSDAY, *23rd March* 1899.—9 *to* 11 A.M.

[*Not more than* SIX *Questions to be answered.*]

1. "Not only do systems of law change their contents, but the conception of Law itself changes." Illustrate.

2. What is legal sovereignty? In what other applications is the term "sovereignty" used? In what sense is the legal sovereign omnipotent?

3. Examine Interpretation as an instrument of legal development.

4. Is the doctrine of Absolute Duties tenable?

5. Explain the following terms:—Juristic Act—Right *in rem* —Obligation—Intention—Law of Things.

6. Show that the term "Person" is both narrower and wider than the term "human being."

7. How was the Law of Nature conceived of by (*a*) the Stoics, (*b*) the later Schoolmen, (*c*) Locke?

8. Distinguish between Negative and Positive Justice. Write a short critical account of the Negative School of Jurisprudence.

9. Does the Theory of the Social Compact in any of its forms furnish an adequate ground of Political Obligation?

10. Examine the institution of Private Property.

PUBLIC INTERNATIONAL LAW.

THURSDAY, 23*rd March* 1899.—11.30 *to* 1.30 *o'clock.*

[*Not more than* SIX *Questions to be answered.*]

1. "The 'civitas maxima' of which theorists have dreamed would be the extinction of International Law." Explain this statement with special reference to the Holy Roman Empire and the Papacy prior to the Reformation.

2. Give some account of the "Science" of International Law prior to Grotius.

3. Enumerate the different varieties of imperfectly independent States. Give illustrations.

4. What are the immunities of a public vessel in a foreign port?

5. What are a State's rights in reference to the navigable rivers within its territory?

6. Examine the doctrine of the equality of States.

7. What are the conditions of a valid treaty? Can a treaty be impugned on the ground of intimidation?

8. For what different purposes may Pacific Blockade be employed? May it affect the commerce of third parties?

9. Mention "quasi-legislative" treaties having reference to the conduct of warfare.

10. Under what conditions will the privileges of combatants be accorded to

(*a*) Guerilla bands ?

(*b*) Levies *en masse* ?

11. What are the obligations of a Neutral State in reference to (*a*) the passage through its territory of Belligerent troops; (*b*) the enlistment of its subjects in the forces of a Belligerent; (*c*) the use of its territory as a base of operations ?

12. What is the Doctrine of Continuous voyages ? To what different acts has the doctrine been applied by Prize Courts ?

13. Explain the following terms:—Exequatur; Alternat; Pactum Transitorium; Embargo; Droit d'angarie.

COMMERCIAL AND POLITICAL ECONOMY AND MERCANTILE LAW.

See papers under Faculty of Arts.

INTERNATIONAL PRIVATE LAW.

FRIDAY, 24*th March* 1899.—12 *to* 2 *o'clock.*

[*Candidates are expected to answer* EIGHT *Questions, of which* TWO *must be selected from the last four.*]

1. Sketch the early growth of International Private Law.

2. How did the Statute Theory as to the Conflict of Laws originate ? Who first propounded it ? What are its defects ?

3. Explain and compare the theories of International Private Law maintained by Savigny and Dicey respectively.

4. Explain the theory of the Italian School.

5. Define Nationality and Domicile. Compare the relative advantages of each as *criteria* of the personal law.

6. How is Domicile (*a*) constituted, (*b*) acquired, and (*c*)

changed in the case of (1) unmarried women, (2) posthumous children, and (3) trading corporations?

7. *A*, a domiciled Englishman, is the owner of goods lying in a warehouse in Scotland, and the holder of a certificate by the warehouseman acknowledging that he holds them to the order of *A* or his asignees by endorsement. *A* in England endorses and delivers the certificate to *B*, also a domiciled Englishman, in security for an advance. Before intimation of this is made to the warehouse-keeper, *C*, a creditor of *A's*, arrests the goods in his hands. Analyse and explain the conflict of law thus arising.

8. What is the rule for the choice of law to govern the legal relation arising out of a delict committed in an uncivilised country, where the personal laws of the respective parties differ from one another, and the question arises in the courts of a country to which neither of them belongs, and which administers a municipal law different from both?

9. To what extent and effect will the Scottish Courts recognise and enforce the adjudication in bankruptcy by a foreign court of a domiciled Scotsman trading within its jurisdiction?

10. A Frenchman and Frenchwoman having married in France without entering into any contract altering the French Law of community of goods between spouses, become domiciled in Scotland. On the death of the husband, survived by the wife and child, is the former entitled to *jus relictae* out of his estate?

Examination Papers for Degrees of M.B. and CH.B.

FIRST PROFESSIONAL EXAMINATION.

CHEMISTRY.

THURSDAY, *14th July* 1898.—10 *to* 12 *o'clock.*

N.B.—*Express your meaning in words, and also by means of equations whenever possible.*

1. How are the following substances prepared?—(*a*) Potassium sulphate from potassium chloride. (*b*) Potassium carbonate from potassium nitrate. (*c*) Chrome-alum from potassium dichromate. (*d*) Ferric sulphate from iron. (*e*) Hydrobromic acid from bromine. (*f*) Olefiant gas from alcohol. (*g*) Aniline from benzene. (*h*) Formic acid from oxalic acid. (*i*) Glycerine from olein. (*k*) Oleic acid from olein.

2. How is malleable iron obtained from cast iron?

3. How could you identify (*a*) Sodium phosphate, (*b*) Sodium arsenate, (*c*) Sodium arsenite, in aqueous solution?

4. Calculate (to two place of decimals) the percentage composition of sodium acetate. $H=1$: $C=12$: $O=16$: $Na=23$.

MONDAY, *27th March* 1899.—10 *to* 12 *o'clock.*

N.B.—*Express your meaning in words, and also by means of equations whenever possible.*

1. Describe and explain the method of preparing oxygen from the air by means of barium oxide (*Brin's process*).

2. What is the usual method of preparing potassium chlorate? What is the action of (*a*) sulphuric acid, (*b*) hydrochloric acid, upon potassium chlorate, and what are the products of its decomposition by heat?

3. The following reagents undergo change on exposure to air ; describe fully the change in each case :—

Solution of (*a*) sulphuretted hydrogen, (*b*) sodium hydrate, (*c*) ferrous sulphate, (*d*) stannous chloride and hydrochloric acid, (*e*) ammonia, (*f*) calcium hydrate, (*g*) sodium sulphite.

4. How are ethyl nitrate and ethyl nitrite prepared? By what chemical actions can these substances be distinguished from one another?

5. Explain what takes place when hydrogen is passed over cupric oxide heated to redness. In an experiment of this kind it was found that the cupric oxide lost in weight to the extent of 27·129 grams and that 30·519 grams of water were formed. From these data calculate the percentage composition of water. Carry the calculation to two figures after the decimal point.

PHYSICS.

THURSDAY, *14th July* 1898.—1 *to* 3 *o'clock.*

(*Only* FOUR *Questions to be answered.*)

1. Describe the process of diffusion in liquids, and show how it can be illustrated by optical means. Give instances of osmotic phenomena.

2. What are the physical differences corresponding to distinctions of *intensity*, *pitch*, *quality*, and *concord* in musical notes.

3. Describe the principle of the Compensation Pendulum, and show on what physical phenomenon the possibility of making such a pendulum depends.

Show that the possibility of achromatism depends on a similar phenomenon.

4. Define *Specific Heat* and *Latent Heat.*

4 pounds of ice at 0° C. are placed in 1 pound of steam at 100° C. Find the temperature of the mixture.

(Take 80 and 540 for the latent heats of water and steam respectively.)

5. Trace the rays by which a *virtual* image is formed by a convex lens, and show how such a lens can be employed as a simple microscope.

6. What circumstances determine the strength of an electric current?

Compare the currents which the same cell can produce in two wires each of great resistance, according as they are placed end to end or side by side. Take the resistances as 2 to 3.

MONDAY, 27*th March* 1899.—1 *to* 3 *o'clock.*

(*Only* FOUR *Questions to be answered.*)

1. Explain the meaning of the terms—Inertia, Force, Energy; and give examples of their correct use.

2. What is temperature, and how do we get at the notion of Absolute Temperature?

100 grams of a substance of specific heat 0·2, and temperature 60° C., are immersed in 50 grams of water at 0° C.; find the temperature of the mixture.

3. What effect has an electric current on the position of a magnet? How could you discover the presence and direction of a current in (*a*) a vertical, (*b*) a horizontal wire?

4. Trace the path of a ray of light through a prism, and describe precisely what occurs at each surface. With the help of a figure describe the action of any kind of telescope or compound microscope.

5. What are the chief characteristics of ordinary wave-motion? Illustrate by reference to three distinct types.

On what does the pitch of the fundamental note of a stretched string depend, and why can we obtain from the string notes of higher pitch?

6. Explain the colour phenomena in (1) a rainbow, (2) a soap-film.

VANS DUNLOP SCHOLARSHIP.

Extra Questions to be answered by Vans Dunlop Candidates, in addition to four chosen from the First Professional Paper in Physics.

I. Describe two distinct methods of obtaining plane polarised light. When a thin slice of quartz is inserted between two "crossed Nicols" set axially in a beam of sunlight, the issuing light is coloured. Explain this.

II. Give the laws of electrolysis, and describe and explain the effect known as the Polarisation of the Electrodes. How may this effect be got rid of in a voltaic cell?

ELEMENTARY ZOOLOGY.

FRIDAY, 15*th July* 1898.—10 *to* 12 *o'clock.*

(*Only* FOUR *Questions to be answered.*)

1. Describe the methods by which oxygen is obtained and conveyed to the tissues in (*a*) the skate, (*b*) the rabbit, (*c*) Arenicola, (*d*) Nephrops, and (*e*) an Insect.

2. What animals are included in the group Echinodermata? Give a short account of the anatomy of any one Echinoderm.

3. Point out the more striking peculiarities in the skeleton of Balaena. How do you account for the rudimentary condition of the hind-limbs?

4. Describe shortly the early stages in the development of the central nervous system in a vertebrate, and give a more detailed account of the parts arising from the anterior cerebral vesicle.

5. Give an account of the Allantois, referring especially to its origin and function in Birds and Mammals.

TUESDAY, 28*th March* 1899.—10 *to* 12 *o'clock.*

[*Only* FOUR *Questions to be answered.*]

1. What are "endoparasites"? Briefly sketch the life-history of any two such forms, and call attention to any peculiarities which have been brought about by the parasitic habit.

2. Compare and contrast *either* (*a*) the brains, *or* (*b*) the limb girdles, in Raia, Rana, Ornithorhynchus, and Macropus.

3. Describe the early development of Amphioxus and Rana so far as may be necessary to make clear the origin of the three germinal layers, the notochord, and the spinal cord.

4. Contrast the breathing apparatus and heart in Nephrops, Raia, Helix, and Periplaneta.

5. Point out in what respects birds in their skeleton (1) agree with reptiles, and (2) differ from mammals.

ELEMENTARY BOTANY.

FRIDAY, 15*th July* 1898.—1 *to* 3 *o'clock.*

[*Only* FOUR *Questions to be attempted.*]

Illustrate your answers by Drawings.

1. How does a dicotyledonous tree increase in girth? Name the parts seen in transverse section on an old tree-stem.

2. Give an account of the life of a moss. Compare this with the life of a fern.

3. By what distinctive characters are angiospermous plants separated from gymnospermous plants?

4. Describe in illustrative examples the methods by which plants control their store of water.

5. What modifications of form are exhibited by the root? Give an example of each, and show how it is adapted to its purpose.

TUESDAY, 28*th March* 1899.—1 *to* 3 *o'clock.*

[*Only* FOUR *Questions to be answered.*]

Illustrate your answers by Drawings.

1. Describe the structure and mode of life of any filamentous alga, and contrast them with similar features in a fungus.

2. What do you understand by parasitism, saprophytism symbiosis? Give an example of each.

3. Describe any albuminous seed. Compare it with an exalbuminous one. Describe and compare the germination of the seeds in the examples you select.

4. Compare the "fructification" of Selaginella with the flower of any Spermaphyte.

5. Name the Groups and Classes of the Vegetable Kingdom. Give the distinctive characters of each.

SECOND PROFESSIONAL EXAMINATION.

ANATOMY.

SATURDAY, 16*th July* 1898.—10 *to* 12 *o'clock.*

1. Describe the distribution of the *unpaired* (single) branches of the Abdominal Aorta, and give a *résumé* of their anastomoses. By what channels does the blood pass from the viscera supplied by these vessels to the heart?

2. Describe the course, relations, and attachments of the tendons of insertion of the following muscles:—Tibialis posticus, Flexor longus hallucis, Peroneus longus.

3. Describe, step by step, the dissection you would have to make in order to expose the whole length of the *right* Common Carotid artery. Give an account of the structure of the coats of an artery of the size of the common carotid.

4. Describe the distribution of the Supra-orbital, Infra-orbital, Auriculo-temporal, and Mental branches of the Fifth Cranial nerve.

WEDNESDAY, 29*th March* 1899.—10 *to* 12 *o'clock.*

1. Cut through the posterior wall of the Pharynx by a mesial longitudinal incision, and describe the position of the openings which are then seen, also the relation of the parts which are associated with them.

2. Describe the relations of the Heart under the following heads :—

(*a*) The osseous and cartilaginous structures anterior to it.

(*b*) The objects which intervene between it and the anterior chest wall.

(*c*) The relation of the arterial and auriculo-ventricular openings to the anterior chest wall.

3. Write a systematic description of the Brachial artery. Name its branches in order of their origin.

4. Compare the mucous membrane of the small and large Intestine; (*a*) in their naked eye; (*b*) in their microscopic characters.

PHYSIOLOGY.

SATURDAY, 16*th July* 1898.—1 *to* 3 *o'clock.*

(*Aid your descriptions by sketches when desirable.*)

1. (*a*) Describe the process of secretion with all its attendant phenomena as it occurs in the Submaxillary Gland.

(*b*) What is the chemical composition of the mixed saliva, and what chemical changes does it induce in the food?

2. (*a*) Describe the minute structure of the nerve fibres present in the Sciatic Nerve, and the manner in which they are supported and held together.

(*b*) Enumerate the functions of the efferent fibres contained in the Sciatic nerve of a cat or dog, and explain how they have been ascertained.

3. (*a*) Describe the structure and attachments of the true vocal cords; (*b*) the muscular movements by which the glottis is closed and opened; (*c*) the conditions that regulate the pitch, loudness, and other qualities of laryngeal tones.

WEDNESDAY, 29*th March* 1899.—1 *to* 3 *o'clock.*

(*Aid your descriptions by sketches when desirable.*)

1. (*a*) State the changes that occur in the cells of the Parotid Gland during secretion.
   (*b*) Give the action of the various nerves concerned in salivary secretion, and state how their action has been ascertained.
2. (*a*) Describe the different varieties of corpuscles found in human blood.
   (*b*) How may their number in the blood be ascertained?
   (*c*) What is known as regards their origin, and
   (*d*) their disappearance?
3. (*a*) What are the changes that are produced in the air and blood by pulmonary respiration?
   (*b*) What is meant by the term "Respiratory Quotient," and in what manner is the latter affected by the nature of the diet?

MATERIA MEDICA.

MONDAY, 18*th July* 1898.—10 *to* 12 *o'clock.*

1. Describe the pharmacological action and therapeutic uses of Phosphorus. Mention the chief structural changes produced in chronic phosphorus poisoning. State how you would prescribe phosphorus.

2. Describe briefly how *Iodoform* is prepared. State its therapeutical applications and doses.

3. Describe the pharmacological action of *Atropine* on the heart, respiration, eyeball, and secretions. Mention any substances which act as antagonists to it, and state briefly what actions they antagonise.

4. Give a short description of *Ergot.* State its chief officinal preparations and their doses.

5. Explain what is meant by the term *Counter-irritant.* Mention the counter-irritants which are chiefly used, and describe the local effects of each.

THURSDAY, 30*th March* 1899.—10 *to* 12 *o'clock.*

1. What glandular structures are stimulated by Mercury? Mention the action of Mercury on the blood, and state how it is excreted. What happens to the Mercury in the body that is not excreted, and what therapeutical agent is generally used to facilitate its excretion?

2. State what actions Arsenic has on the blood, the kidneys, and the liver. Mention its effects on the peripheral nerves, and what colour-change, if any, its continued administration produces on the healthy skin?

3. Name the official compounds of Calcium, and state briefly the therapeutical uses of each; giving the doses of those which are used for internal administration.

4. What is Caffeina? What are its therapeutical uses? Under what circumstances does it raise the body temperature? When locally applied to the eye, what effect has it on the pupil? What is its official compound, and what are its doses?

5. What is Santoninum? For what is it used, and what are the best methods of administering it? Describe its pharmacological actions and give its doses.

THIRD PROFESSIONAL EXAMINATION.

PATHOLOGY.

TUESDAY, 19*th July* 1898.—10 *to* 12 *o'clock.*

1. Give a short account of the principal theories as to the nature of immunity from certain specific infective diseases.

In what ways may such immunity be acquired? Give illustrative examples.

2. Describe the changes which may occur in the lung as the result of Syphilis, (*a*) congenital; and (*b*) acquired.

3. What are the causes of (*a*) Purulent Meningitis, and (*b*) Abscess of the Brain? Describe the morbid appearances in the principal forms of each of these conditions.

4. Give an account of the tubercular lesions which may be met with in the Lymphatic glands. Describe the various stages through which a tubercle nodule may pass.

SATURDAY, *8th April* 1899.—10 *to* 12 *o'clock.*

1. What lesions may be met with in a case of Diphtheria? State what you know of the causes of such lesions.

2. Give a detailed account of an Embolic infarction from the moment of the impaction of the Embolus.

3. Describe the more important changes which occur in the blood and in the various organs in Pernicious Anæmia.

4. Give a short account of the principal changes due to Tuberculosis in the Bones and Joints.

FORENSIC MEDICINE.

TUESDAY, 19*th July* 1898.—1 *to* 3 P.M.

1. Mention the circumstances of a Medico-legal nature attending Incised Wounds of the Neck.

(*a*) Detail the appearances in the dead body characteristic of the various causes of death from these injuries.

2. The body of a newly-born male child is found exposed and a female is arrested on suspicion. What appearances in her and the child would justify you in certifying—

(*a*) that she had been recently confined;

(*b*) and that the child was mature and had survived its birth?

3. (*a*) Name the principal Poisons in the class of Vegetable Irritants.

(*b*) From which of them have alkaloids been separated?

(*c*) Describe the process for their separation.

(*d*) Explain how the detection of an Alkaloid in these Poisons assists the ends of justice.

PUBLIC HEALTH.

TUESDAY, 19*th July* 1898.—1 *to* 3 *o'clock.*

I.—*Excrement Disposal.*

(*a*) Explain shortly the "wet" and the "dry" methods of Excrement Disposal.

(*b*) State under what circumstances you would give a preference to one or another of such methods.

II.—*Vaccination.*

(*a*) What are the alleged dangers of Vaccination?

(*b*) How may these alleged dangers be guarded against?

III.—*Period of Infection.*

What is the earliest period, compatible with safety to others, at which you would certify scholars fit to return to school, after attacks of the following infectious diseases?—

(*a*) Scarlet Fever?
(*b*) Whooping Cough?
(*c*) Small-pox?
(*d*) Diptheria?
(*e*) Measles?
(*f*) Mumps?

SATURDAY, *8th April* 1899.—1 *to* 3 *o'clock.*

1. Milk supply—

(1) Mention the diseases whose spread has been ascribed to the agency of milk.

(2) Explain how milk may become specifically contaminated.

(3) State what measures, general and special, you would advise for preventing the dangers arising from an infected milk supply.

2. What is the estimated amount of water per head per day for personal and domestic use in a middle class household? Under what items is the amount made up?

3. Give examples of diseases in which the infection is believed to be given off by—

(*a*) The breath.

(*b*) Desquamated particles of epidermis.

(*c*) Secretions and excretions.

FINAL PROFESSIONAL EXAMINATION.

MEDICINE.

MONDAY, *20th June* 1898.—10 A.M. *to* 12 NOON.

Only THREE *questions to be answered.*

1. Enumerate the direct and the indirect symptoms and signs of Aortic Aneurism, and describe and explain in detail those which depend upon pressure on nerves.

2. Describe the morbid Anatomy and Clinical history of Gastric Ulcer, and state what treatment you would adopt in such a case, writing one prescription as it should be sent to the druggist.

3. Give the grounds for a differential diagnosis between Phthisis pulmonalis and Bronchiectasis, and state what treat-

ment you would adopt in the latter disease, writing a prescription as it should be sent to the druggist.

4. Describe (*a*) an attack of Acute Articular Gout, (*b*) of gouty affection of the heart, and state what treatment you would adopt in each, giving a prescription.

MIDWIFERY.

MONDAY, 20*th June* 1898.—1 *to* 3 P.M.

Only THREE *Questions to be answered, of which one must be No. IV.*

I.—*The Ovary.*

1. Describe its Form and Size: its Relations: its Structure and Development.

2. What changes occur in it in connection with Menstruation and Pregnancy?

II.—*Twins.*

1. Give their developmental varieties.
2. How may they be diagnosed?
3. What disturbances of Gestation may arise?
4. What dangers may arise during Labour.

III.—*Accidental Hæmorrhage.*

1. Explain the Nature.
2. State the Causes.
3. Give the Symptoms and Diagnosis.
4. Give the Treatment.

IV.—*Menorrhagia and Metrorrhagia.*

1. Define these Terms.
2. Enumerate the Causes.
3. Explain the relation of Uterine Hæmorrhages to Uterine Fibroids.
4. Give the Medical Treatment of Menorrhagia.

SURGERY.

TUESDAY, 21*st June* 1898.—10 A.M. *to* 12 NOON.

Only THREE *Questions to be answered.*

I. Treatment of a case of *Strangulated Femoral Hernia*—
(*a*) When the bowel is in a condition to be returned.
(*b*) When the bowel is gangrenous.

II. *Scirrhus* of the *Mammary Gland.*
(*a*) Diagnosis.
(*b*) Operation.
(*c*) Appearances—naked eye and microscopic—after removal.

III. What are the symptoms indicating accumulation in the *Maxillary Antrum*?
(*a*) How would you make a diagnosis?
(*b*) What treatment would you adopt?

IV. *Hæmorrhoids.*
(*a*) Varieties.
(*b*) Symptoms.
(*c*) Treatment of each variety.

CLINICAL MEDICINE.

Examinations, written, oral and practical, on cases in wards of the Royal Infirmary.

CLINICAL SURGERY.

Examinations, written and oral, on the Symptoms, Diagnosis, and treatment of Surgical Cases in the wards of the Royal Infirmary.

Papers for Degrees in Music.

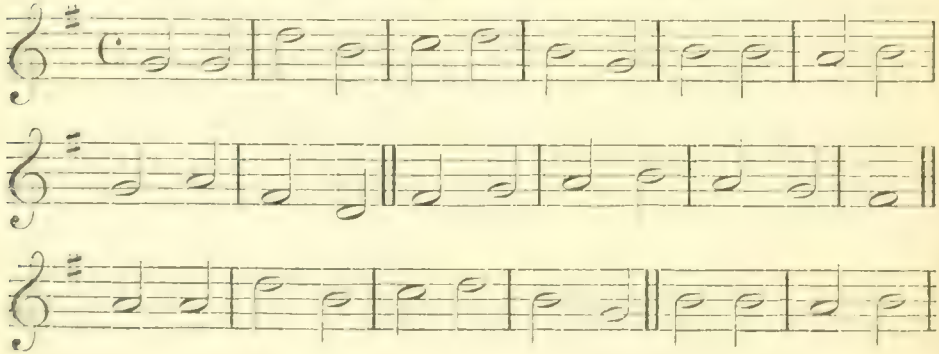
FIRST PROFESSIONAL EXAMINATION.

HARMONY.

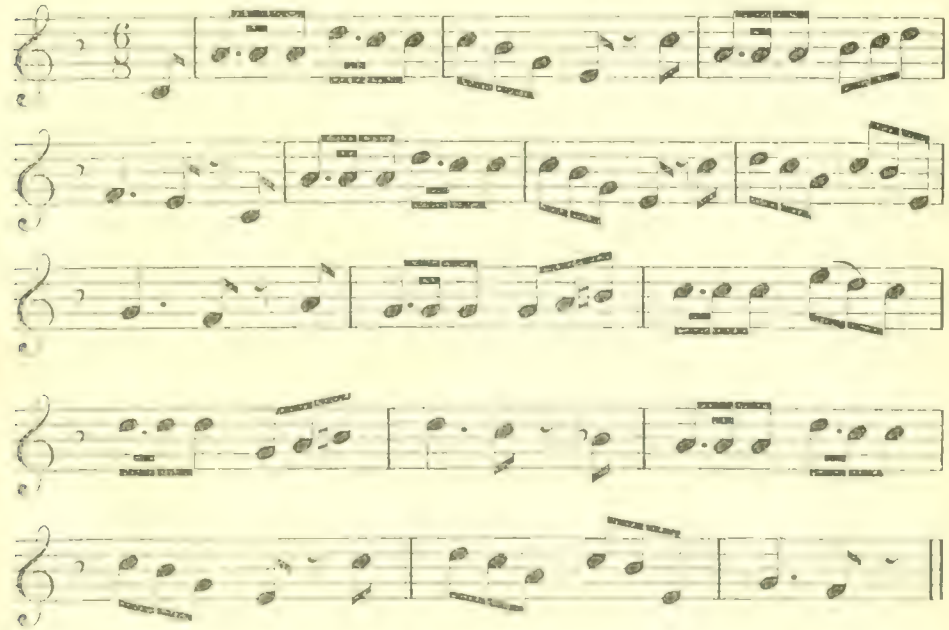
TIME—*Three hours.*

1. Add three parts to the following Figured Bass:—

2. Harmonise the following Chorale in four parts:—



3. Add to the following melody a simple accompaniment, so that the whole forms a little pianoforte piece: —



4. Write two forms of the Half Close in B minor, and three Interrupted Cadences in the same key.

5. Modulate—

(*a*) from G major to B minor by means of a Secondary Chord of the Seventh common to the two keys:

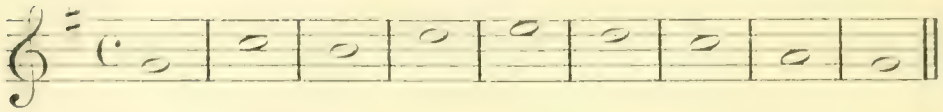
(*b*) from A minor to E flat major by enharmonically changing the Chord of the Diminished Seventh:

(*c*) from B flat major to D major by any means you like.

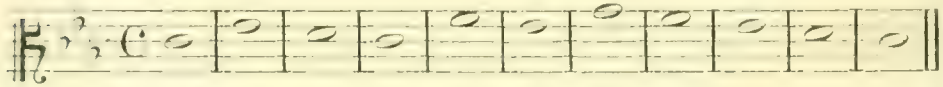
COUNTERPOINT.

TIME—*Three hours.*

(*a*)



(*b*)



1. Write a part in the fourth species above (*a*).

2. Transpose and place (*a*) in the bass, and write above it a middle part in the first species, and a highest part in the third species.

3. Give (*a*) to the highest part, and write a middle part in the fifth species, and a lowest part in the first species.

4. Write above (*b*) a part in the first species, and below it a part in the fourth species.

5. Put (*a*) in the soprano, and add to it an alto in the second species, and a tenor and a bass in the first species.

ELEMENTS OF MUSIC.

TIME—*Three hours.*

1. Sketch the history of our Stave Notation—in other words, point out the principal stages in the development of that notation.

2. Does the stave always comprise five lines?

3. What is meant by the Great Stave?

4. Why are certain signs used in connection with the stave called Clefs, and what is the origin of their shapes?

5. Write the note *e'* in all the clefs now in use.

6. Explain the meaning of the terms "fixed *do*" and "movable *do*."

7. How many different forms of the Minor Scale have we, and which is the original form? Describe and illustrate the several forms.

8. What is meant by the Inversion of an interval, and what by the Inversion of a chord? Explain and illustrate this.

9. Write above *e* sharp, a diminished fourth, a major seventh, an augmented third, and a perfect fifth, and invert these intervals.

10. Enumerate and group the measures in common use in good music, and point out the position of the accents in them, the subordinate as well as the principal accents.

11. Group the following *tempo* indications, proceeding gradually from the slowest to the quickest, and write after each an English translation. If there is uncertainty as to the position of a term, say so; and bracket those which are equivalents:—*Allegro, Andante, Vivace, Allegro moderato, Andantino, Largo, Allegro assai, Allegro con moto, Presto, Larghetto, Allegro con brio, Molto Adagio, Prestissimo, Lento.*

12. Whence comes it that we call our longest note a Semibreve?

13. In what measures are the following dances:—*Sarabande, Courante, Gigue, Allemande, Gavotte*, and *Siciliano*?

14. In what ways can you indicate the repetition of a bar, if you do not wish to write it again?

15. How can you indicate the repetition of part of a bar? Illustrate the answer to this and the foregoing question.

16. Classify, describe, and illustrate non-harmonic notes, also called Grace Notes.

17. What is the meaning of "prima volta," "seconda volta," "volti subito," "senza replica," "da capo al segno," "perdendosi," "colla sinistra."

18. Distinguish between "all' ottava" and "coll' ottava," a Bind and a Slur, a Pause and a Rest, a Cadence and a Cadenza.

19. Write the following notes on the stave:—*e''*, *d*, *D*, *f'''*, *A*, the Contra *C*, the small *c*, the once-accented *c*, the middle *c*, and the *c* in alt.

20. Explain the following terms:—*Capriccio*, *Ballad*, *Diatonic*, *Chromatic*, and *Enharmonic*.

FORM.

TIME—*Three hours.*

1. Explain the terms Binary and Ternary as used in connection with periods and larger structures.

2. What is the orthodox key distribution in the sonata form, and what are the deviations most frequently met with?

3. Describe that form, generally classed with the rondo forms, which partakes as much of the nature of the sonata as of the rondo.

4. What is meant by "abbreviated sonata form"?

5. Give skeleton schemes of the Sonata Form and the most common Rondo Forms.

6. Analyse:—

(*a*) Mozart's Pianoforte Sonata in B flat major, C.

(*b*) The first Fugue, in C major, of the second part of J. S. Bach's "Wohltemperirtes Clavier."

In analysing the sonata, point out not only the main divisions, but also the subdivisions; not only the subjects, but also their constituents; and pay particular attention to the working out of the subject matter, the utilisation of motives, and modulation.

HISTORY OF MUSIC.

TIME—*Three hours.*

1. What is the main division of the history of music?

2. Divide the history of music from the 15th to the 17th century into schools.

3. State the succession in, and the epochs at which the European nations that took part in the development of music became predominant in the art.

4. Sketch the rise and evolution of harmony.

5. Characterise the most important schools of the 15th and 16th centuries.

6. To what schools belonged, and at what times lived:—Nanino, Josquin Deprès, Willaert, Dufay, Morales, Leo Hassler, Okeghem, Giovanni Gabrieli, Pergolesi, Dunstable, Jannequin?

7. Compare the texture of the music of the 16th century with that of the later 18th and early 19th.

8. What was the character and structure of the earliest operas?

9. Who were the most important composers of French Grand Opera? Can you give the titles of some of their most famous works, and the approximate time when they were produced?

10. Who is the earliest of the great composers of symphonies and string quartets, and at what time did he begin to cultivate these two branches of the art?

11. How many musicians of the name of Gabrieli, Bach, and and Haydn do you know? Mention their Christian names and relationship.

12. Give short accounts of the lives and works of the following musicians:—Josquin Deprès, Rossini, Purcell, Hummel, Alessandro Scarlatti, Grétry, Henry Lawes, Carissimi, Francois Couperin, Paganini.

13. Who are the authors, and what are the kinds and characters of the following works: –"I Puritani," "Missa Papae Marcello," "Le Carnaval Romain," "Idomeneo," "Le Désert," "The Seasons," "The Hebrides," "La Muette," "Souter liedekens."

SECOND PROFESSIONAL EXAMINATION.

RHETORIC AND ENGLISH LITERATURE.

TIME—*Three hours.*

1. Name in chronological order the ten or twelve most important poets who lived in the period from the 14th century to the end of the 18th.

2. Who are the poets that usher in the spirit of the 19th century, and in what did this spirit differ from that of the 18th?

3. Enumerate the principal Elizabethan and Jacobean dramatists.

4. Characterise Jonson and Shakespeare as dramatists.

5. Write short notes on the following writers of verse and prose:—Herrick, Langland, Addison, Mrs. Browning, Wycherley, Spenser, and Jane Austen.

6. Who are the authors, and what is the nature, of the following works:—"Christabel," "The Blessed Damozel," "Utopia," "The Sensitive Plant," "The Duchess of Malfy," "Men and Women," "The Pet Lamb," "Aurora Leigh," and "The Queen of the Air"?

7. Explain and exemplify the following terms:—*Alliteration*, *Assonance*, *Climax*, *Dactyl*, *Caesura*, *Feminine Ending*, *Metrical Metamorphosis*, and *Hypermetrical*.

8. Define the Epic, the Lyric, the Reflective, and the Rhetorical.

9. Describe the Spenserian Stanza, and the form or forms of the Sonnet.

10. What are Heroic Couplets?

11. Analyse metrically Nos. 2, 8, and 10 of "The Golden Treasury." Note the kind and number of feet, metrical irregularities, rhyme arrangements, and form of stanzas.

12. Write a monotone rhythmical composition to the first eight lines of No. 10. The rhythm must be musically free, not mechanically measured.

13. Give examples of Iambic, Trochaic, Anapaestic, and Dactylic metre.

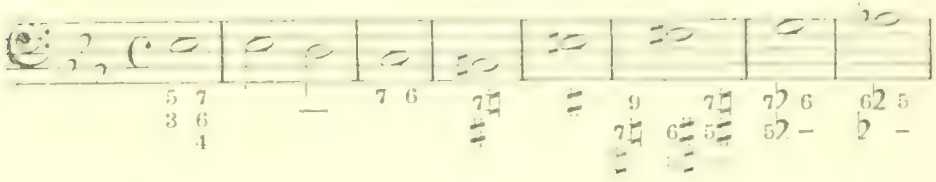
14. Analyse, with regard to its musical and non-musical contents, Gray's "Elegy written in a Country Churchyard" (see p. 172 of "The Golden Treasury").

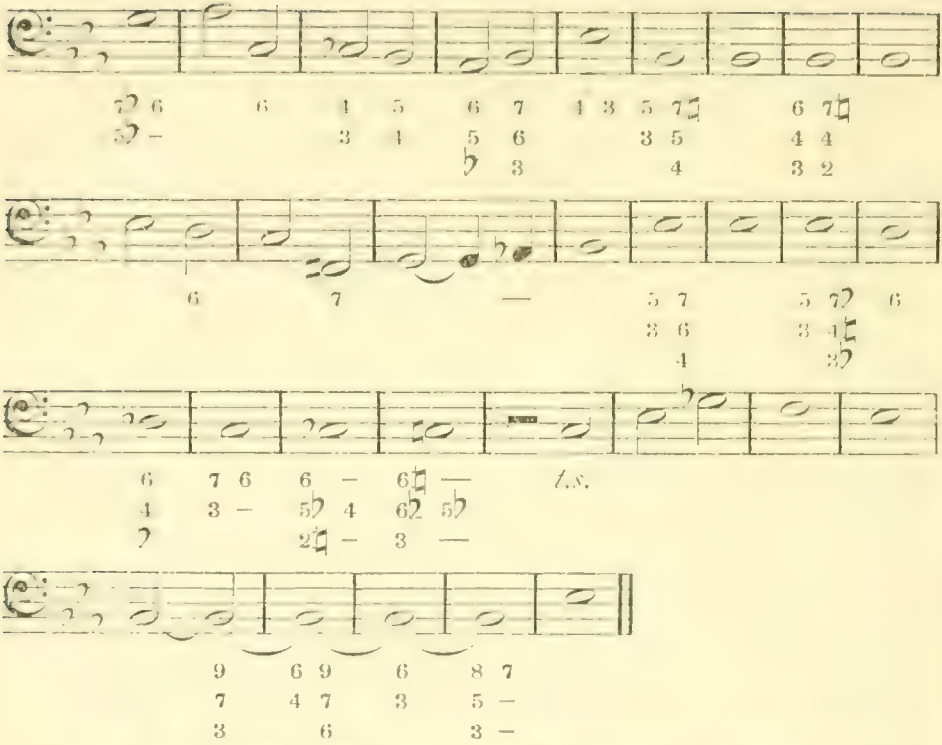
15. Write a short expository essay on one of the following plays of Shakespeare, and state which parts are favourable for musical drama, which for incidental lyrical or instrumental treatment:—"The Tempest," "Romeo and Juliet," "The Merchant of Venice," and "The Merry Wives of Windsor."

HARMONY.

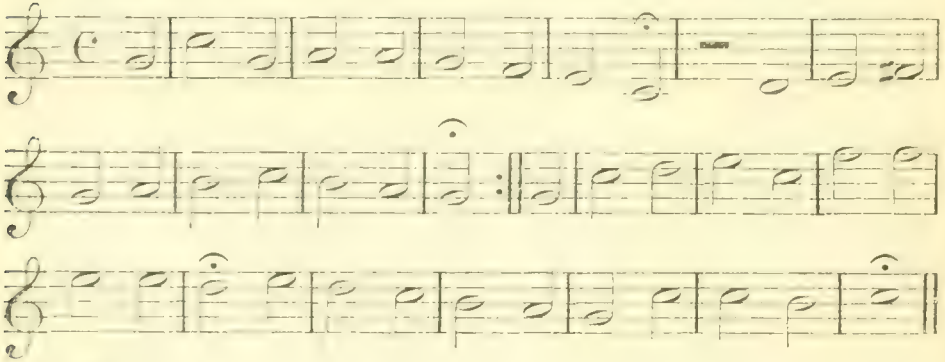
TIME—*Three hours.*

1. Add three parts to the following figured bass, making these parts, especially the treble, melodically interesting. You are free to use passing notes and auxilary notes. Write in open score.





2. Add four parts to the following Chorale (in open score):—



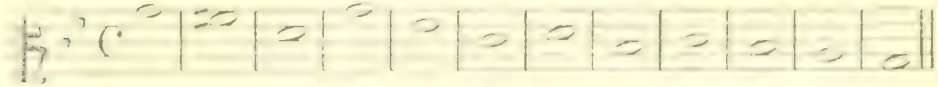
3. Write a pianoforte accompaniment to the following song :—

4. Modulate from B flat to E major in the following three ways:—(*a*) by means of a Chromatic Chord; (*b*) by means of an Enharmonic change: and (*c*) gradually by any means you like. Aim at beauty as well as at correctness.

COUNTERPOINT.

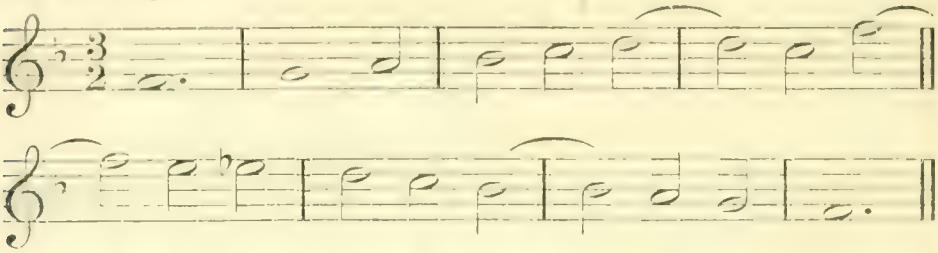
TIME—*Three hours.*

1. Add a part in the third species above and a part in the second species below the following cantus firmus:—

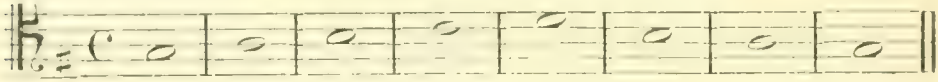


2. Write three parts in the fifth species above the following cantus firmus:—

3. Add below the following melody three flowing parts in the free style:—



4. Write to the following cantus firmus one Double Counterpoint of the fifth species in the octave, one in the tenth, and one in the twelfth:—

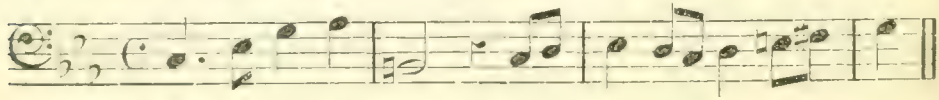


CANON AND FUGUE.

TIME—*Three hours.*

1. Continue the following Canon at the Fifth below, with a free bass, for about ten bars, and make it infinite:—

2. Write a four-part Fughetta, consisting of a regular exposition and a coda, on the following subject:—



3. Give the answers to the following subjects :—

INSTRUMENTATION AND CRITICAL KNOWLEDGE OF SCORES.

TIME—*Two hours.*

1. Write for String Quartet and Double Bass the chords given below at (*a*) so as to obtain the greatest fulness and loudness.

2. Write the small *a* for the following instruments: Horn in F, Trumpet in D, Tenor Trombone, and Double Bass.

3. Score the passages given below: (*b*) for Oboe and Clarinet in A; (*c*) for two Horns in D and two Bassoons; and (*d*) for one Flute, one Oboe, two Clarinets in B flat, and two Bassoons.

4. What is the compass of the Flute?

5. Name the Clarinets commonly used in the orchestra.

6. What clefs are employed in writing for the Violoncello?

7. Are Mozart's C major symphony (Jupiter), Schubert's unfinished B minor symphony, and Beethoven's overture to "Egmont," written for the same instruments? If not, in what respects do they differ?

8. State what Clarinets, Horns, and Trumpets are used in the above-mentioned works, and what are the keys of the several movements.

9. In the third bar of the second part of Mozart's first movement the strings begin as below at (*c*). Supply the composer's wind parts.

10. Describe the instrumentation of the *pianissimo* passage (the last ten bars) of the introduction of the overture to "Egmont."

11. How is the song-like second subject of the first movement of Schubert's B minor symphony accompanied when first given out by the 'celli?

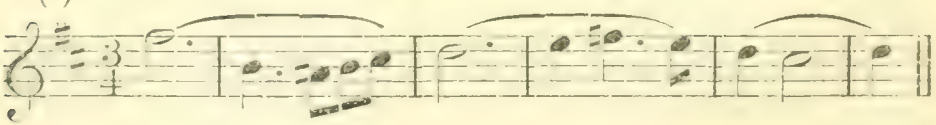
12. Describe the instrumentation of the opening portion of the second movement of Schubert's symphony; and write in score the first two bars, and continue the parts of the instruments employed in them for another quaver (tonic, dominant, and tonic harmonies).

13. How are the Horns used in the three works—melodically or harmonically? If they are sometimes used melodically, say where they are so used.

INSTRUMENTATION AND CRITICAL KNOWLEDGE OF SCORES.

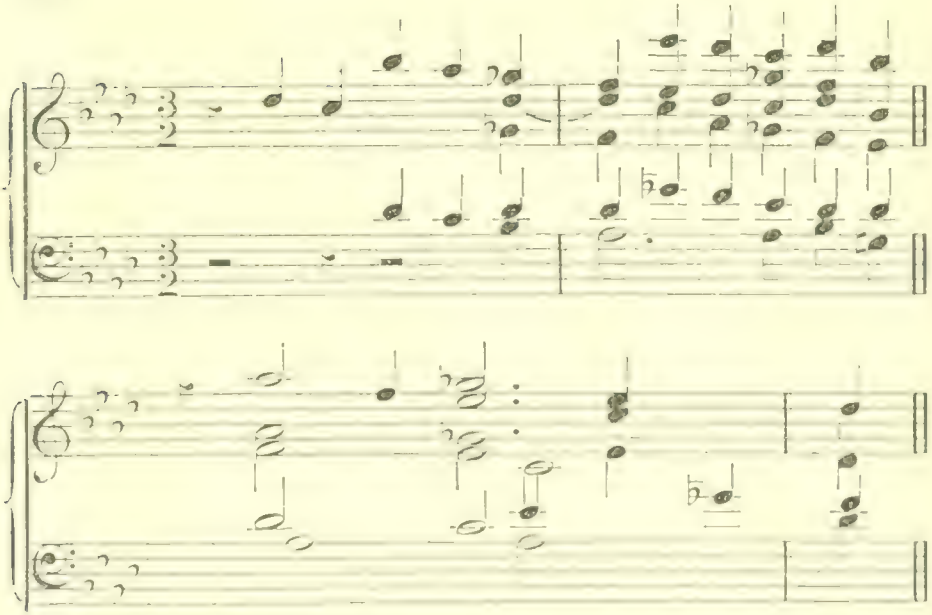
(*a*)

(*b*)



(*c*)

(*d*)



(*e*)

FORM.

TIME—*Three hours.*

1. Analyse:—
   (*a*) J. S. Bach's Organ Prelude and Fugue in C major, No. 17;
   (*b*) Schumann's Pianoforte Sonata in G minor.

Be full; tabulate your statements clearly and methodically; and avoid wordiness. Make your analysis of the sonata a comparative analysis, keeping in view Haydn's, Mozart's, and Beethoven's sonatas.

2. Describe concisely the various rondo forms you have met with.

HISTORY.

TIME—*Three hours.*

1. Sketch the history of the Oratorio from the year 1600 to the present day, giving not only names, titles, and dates, but also descriptions of the form and texture of the works.

2. Compare, with regard to their form and texture, the works of J. S. Bach with those of Mozart; then the works of Mozart with those of Beethoven; and lastly, the works of Beethoven with those of Berlioz, Liszt, and the most modern, such as Tschaïkowsky and others.

3. Write short notes on the following musicians:—Pelham

Humfrey, Ignaz Pleyel, César Franck, Samuel Sebastian Wesley, Gioseffo Zarlino, and Thalberg.

4. By whom are the following works:—"L'Olympie," "The Gran Mass," "Irdisches und Göttliches im Menschenleben," "Jean de Paris," "King Arthur," "Béatrice et Bénédict," and the "Ocean Symphony"?

ACOUSTICS AND PHYSIOLOGY OF THE VOCAL ORGANS.

TIME—*Three hours.*

1. State what you know about the velocity of sound in air and other media.

2. What are the respective causes of Noise and Tone?

3. Explain what is meant by the words Length, Amplitude, and Form in connection with sound-waves.

4. Name the 6th, 8th, and 10th Upper Partials of the tone A flat.

5. Which is the interval above or below a tone that blends with it most readily; and which is the interval that comes next in this respect?

6. If the tone c'' is produced by 528 vibrations, by how many vibrations are produced the tones of c''', G, c', and b flat?

7. What is Helmholtz's theory of Beats?

8. How many kinds of Combinational Tones are there? What are their names? Give some examples of them.

9. What are Tartini's Tones?

10. How has difference in the quality of tone (tone colour) been accounted for?

11. Explain the cause of the effect produced by the use of what is popularly called the "loud pedal" of the pianoforte.

12. In what way does a mute (*sordino*) placed on the bridge, affect the tone of a violin or any other string instrument?

13. Follow, as it were, the air *to* the lungs and *from* the lungs, and describe the actions that accompany the passage, and the places that are passed through and by.

14. Describe in detail the Larynx at rest and in action.

15. What and where are the Vocal Chords, the Crico-arytenoid and Thyro-arytenoid muscles, the Glottis, and the Ventricles of Morgagni?

16. What is meant by the "shock of the glottis"?

17. How are the different vowels produced?

18. Can you describe the sensations experienced by singers in using the different registers of the voice?

Examination Papers printed by T. and A. Constable,
at the University Press.

New Foundations.

SCHOLARSHIPS OF THE SONS OF THOMAS THOW, OF DUNDEE.

These Scholarships, three in number, of the annual value of about £25 each, were founded by the Trustees of the late Miss Christiana Thow of Craigmore, West Ferry, near Dundee, according to the desire of Miss Christiana Thow and her sister, Miss Margaret Thow, and out of respect to the memory of their brothers.

The following are the Rules and Regulations applicable to the said Scholarships :—

1. The Scholarships shall be distributed annually, one to the most distinguished student for the Winter Session in the Class of Scots Law at the University of Edinburgh ; another to the most distinguished for the Winter Session in the Class of Conveyancing at the said University ; and the third to the most distinguished student for the Winter Session in any two of the following Classes at the said University, viz. :—Public Law, Civil Law, and Constitutional Law and History.

2. Each of the Scholarships shall be tenable only for one year by the student in the subject for which it has been bestowed upon him, but the same student may competently obtain one of the Scholarships set apart for the other subjects in a succeeding session, provided he has the necessary qualification.

3. No student can hold two of these Scholarships for the same year, although he may have satisfied the conditions in other respects. In the event of any student being first as regards two of the Scholarships, the Faculty of Law shall determine which Scholarship shall be awarded to him, and which shall be taken by the next most distinguished student.

4. There shall be no restriction as to holding one of these Scholar-

ships along with another Scholarship or Bursary from another source.

5. The Scholarships shall be payable at the end of each winter session, on the certificate of the Dean of the Faculty of Law.

The foregoing Rules and Regulations are subject to such alterations and modifications as the Trustees may from time to time think fit.

DEED OF DIRECTIONS BY SIR WILLIAM FRASER, K.C.B., DATED 11*th December* 1896.

I, Sir William Fraser, Knight Commander of the Bath, Doctor of Civil Laws of the University of Edinburgh, residing at Number thirty-two South Castle Street, Edinburgh, with reference to the Trust Disposition and Settlement executed by me on the tenth day of December, one thousand eight hundred and ninety-six years, do hereby direct as follows:—(*First*) I direct my Trustees to take charge of all books, manuscripts, papers, letters, and documents of every kind belonging to me, and after a careful examination of these, either by themselves or by some competent person to be selected by them, I leave it to their discretion to decide what documents should be preserved and what should be destroyed; I further authorise my Trustees to publish or print for private circulation or otherwise such documents as they may think proper with the special object of illustrating the history and antiquities of Scotland, and for that purpose I direct my Trustees to expend out of the Trust Funds such sum as they may think proper during the first ten years after my death, but not exceeding the sum of three thousand pounds in all; (*Second*) I direct my Trustees to set aside the sum of fifteen thousand pounds free of Government duty, and to pay the annual income and produce thereof half-yearly or as the same shall be received by them to my only sister Anne Fraser, residing with me during all the days of her life after my death for her alimentary use [since deceased]; (*Third*) Looking to my long connection with the great University of Edinburgh, it is my desire to contribute to the welfare and extension of such a noble Institution by the foundation of an additional Chair in connection with what may be considered my own life work, as well as by other foundations also consistent with and helpful to that work. It is now nearly sixty years since I first had the honour to claim connection with the University of Edinburgh. In the Winter Session of the years one thousand eight hundred and thirty-seven and one thousand eight hundred and thirty-eight, I was a matriculated student under the then Professor of Conveyancing, Mr Macvey Napier, a Writer to the Signet, a distinguished Conveyancer, and a man of literary attainments, who also held the responsible position of editor of the *Edinburgh Review* in succession to Lord Jeffrey. The Notes of Professor Napier's Lectures on Conveyancing made by me when a member of his class, are still

preserved. About the same time I also attended as a student the Lectures of Mr George Joseph Bell, Advocate, Professor of Scots Law. During the nearly sixty years which have elapsed since the year one thousand eight hundred and thirty-seven when I was first connected with the University of Edinburgh, I have had the privilege to be known to several of the Chancellors, Lord Rectors, and Principals of that University, beginning with the very Reverend and learned Principal John Lee, Doctor of Divinity, who was aware of my historical investigations in many forms, and in his quiet and unostentatious way encouraged me in the prosecution of them. When one of my earliest privately-printed Family Histories was presented to the Library of the University, he wrote me a holograph acknowledgment of it, in which he generously over-estimated it as the finest book presented to the University in his time, and he added, "None but itself can be its parallel." In the continued prosecution of my studies to the present day, I have from time to time gratefully acknowledged the kindness accorded to me by all the officers of the Metropolitan University, especially in the facilities afforded me for frequent consultation of works in their Library; and in addition to what I have now stated, the University, in the year one thousand eight hundred and eighty-two, was pleased to bestow upon me the distinction of Doctor of Laws; therefore I direct my Trustees as soon as my Estate will admit, after providing for the prior purposes of the Trust, to pay and make over the sum of twenty-five thousand pounds, free of Government duty, to the Principal and whole other members of the Senatus Academicus of the University of Edinburgh, to be held by the said Principal and whole other members for the purpose of founding and endowing in the said University a Chair or Professorship of Ancient History, with special reference to Palæography or the Science of Ancient Writings, and also with reference to the Historical Records and Charters of the Royal, Noble, and Baronial Families and the Royal Burghs of Scotland or of other countries, to be called "The Sir William Fraser Professorship of Ancient History and Palæography," the right of nomination or presentation to the said Chair or Professorship to be vested in the University Court of the said University of Edinburgh, and I give full power to the said Senatus Academicus to apply the income of the said sum of twenty-five thousand pounds either wholly in payment of the salary of the Professor occupying the said Chair, or partly in payment of the said salary and partly in connection with other expenses connected with said Chair; and I further give full power to the said Senatus Academicus to make any rules and regulations for the management of the said Chair and for administration of the said Endowment thereof not inconsistent with the foregoing conditions and subject always to the control and review of the said University Court, provided always that the capital sum hereby provided shall in all time coming be applied by the said Senatus Academicus of the said University for the purpose of said Chair and Professorship only and for no other purpose what-

ever; (*Fourth*) I direct my Trustees as soon as my Estate will admit, after providing for the prior purposes of the Trust, to pay to the said Principal and whole other members of the Senatus Academicus of the University of Edinburgh the sum of ten thousand pounds, free of Government duty, which sum I direct to be held by the said Principal and whole other members in Trust, so that the annual income and produce thereof may be applied for the purposes of the Library of said University in such a way and manner as shall appear to said Principal and whole other members to be most desirable, but I hereby direct and provide that not less than two-third parts or shares of said annual income shall be applied in augmenting the salaries of the Librarian, Assistant-Librarians, and other officers connected with said Library; (*Fifth*) I further direct my Trustees as soon as my estate will admit, after providing for the prior purposes of the Trust, to apply the sum of twenty-five thousand pounds in the Foundation and Endowment of Homes for the Poor in the City or County of Edinburgh in manner and according to a scheme for founding and endowing the same, and under the rules and regulations for the management thereof, all as may be specified in any further Deed of Directions which may hereafter be executed by me at any time of my life; and failing my executing any such Deed, I hereby specially direct and empower my Trustees to execute a Deed of Directions regulating the scheme for founding and endowing the said Homes, and the rules and regulations for the management thereof in every respect, and that as fully and freely as I could have done myself, my said Trustees being hereby in that matter vested with the most full and absolute powers, both in regard to the sum to be expended in the founding of the said Homes and in the erection of the buildings if any are erected for the accommodation of the inmates, and in regard also to the sums to be expended annually in the administration and management thereof, or to be paid to the inmates of the said Homes for their support. And in reference to the appropriation and distribution of the annual sums to be received and administered under this Fifth Head of this Deed of Directions, I declare it to be my wish and intention that the persons to be benefited thereby should include preferentially those who may be ascertained to be authors or artists, and who, either from non-success in the profession or work of literature or of Art, or from whatever other cause are in necessitous circumstances, the character of the said beneficiaries being always found to be satisfactory to the administrators; (*Sixth*) With reference to the residue of my means and estate, including the above sum of fifteen thousand pounds directed to be held for my said sister as and when the same is set free, I direct my Trustees after fulfilling the prior purposes of these presents to divide the same into two equal parts or shares and to pay and make over one part or share to the Royal Infirmary, Edinburgh, and to pay and make over the other part or share to the Principal and other members of the Senatus Academicus of the University of Edinburgh for the general purposes of said University, but more particularly if it

can be arranged for the foundation of Bursaries in connection with History or Studentships for promoting research in Historical subjects, and I direct that if thought proper a portion of the said funds shall be applied towards the expenses of publishing original works in connection with Historical subjects; and I consent to registration hereof for preservation; in witness whereof these presents written on this and the two preceding pages by the Rev. William Scott, Minister of the Gospel, residing at No. 2 Argyle Park Terrace, Edinburgh, are subscribed by me the said Sir William Fraser, at Edinburgh, on the eleventh day of December, in the year one thousand eight hundred and ninety-six, before these witnesses, the said Rev. William Scott and Alexander James Wright Buchanan, Student of Medicine in the University of Edinburgh, and residing at No. 2 Malta Green Place, Edinburgh.

(Signed) WILLIAM FRASER.

WILLIAM SCOTT, *Witness.*
ALEXANDER J. W. BUCHANAN, *Witness.*

ALLAN FELLOWSHIP.

EXCERPT from Trust Disposition and Settlement by Mrs Jane Cassels or Allan, Edinburgh, Widow of John Allan, M.D., Surgeon in the H.E.I.C.S., dated 15th March, 1881.

I direct my said Trustees and Executors, at the first term of Whitsunday or Martinmas that shall happen six months after my death, to make payment of the following legacies, all free of legacy duty; . . . . . .

To pay over in manner herein after directed the sum of one thousand five hundred pounds sterling, for the Foundation of a Competitive Fellowship in the University of Edinburgh, for graduates of the Faculty of Medicine in memory of my husband the said Doctor John Allan, to bear his name and to be for the encouragement of proficiency in the subjects of the course of study in the said Faculty generally, or of such one or more of these subjects as may be thought advisable by the Senatus Academicus of the said University at the time. And I direct my said Trustees and Executors in the first place to make offer of the amount of this bequest to the Association for the better Endowment of the University of Edinburgh, on condition that they shall, within two years after my decease, add such a sum thereto as will make up a total fund of Two thousand five hundred pounds sterling and therewith found a Fellowship in the University of Edinburgh in terms of the directions above set forth, and immediately on the necessary sum being appropriated to this object by the said Association, I direct my said Trustees and Executors to make payment of this bequest to the acting Secretary or other Officer of the said Association acting as Treasurer for the time, and I declare that his receipt shall be a sufficient discharge to my said Trustees and Executors; but failing the appropriation of the

said sum by the said Association within the period before mentioned, I direct my said Trustees and Executors to make payment of this bequest of one thousand five hundred pounds sterling to the Senatus Academicus of the said University in trust for the foundation of a Fellowship in the said University in terms of the directions above set forth.

Regulations for the Allan Fellowship.

I. That the Allan Fellowship be awarded for distinction in Clinical Medicine and Clinical Surgery.

II. That it be awarded annually after Competitive examination of the six candidates for the degrees of Bachelor of Medicine and Bachelor of Surgery, who, having attended in the University of Edinburgh the necessary qualifying courses in Clinical Medicine and Clinical Surgery, shall obtain the highest percentage of marks in these subjects at the Final examination for the degrees of M.B. and Ch.B.

III. That the Competitive examination be conducted by four Examiners (two for Clinical Medicine and two for Clinical Surgery), to be selected by the Faculty of Medicine, and that an honorarium of One Guinea be paid to each of the Examiners.

Benefactors of the University.

THE Revenues of the University were formerly scanty and very inadequate for the encouragement of the higher education and learning in the Scottish metropolis. Scholarships and Fellowships were unknown prior to those recently instituted, and the emoluments of several of the Chairs are still greatly inferior to those in many other Universities.

During the early period of its history, the University received a considerable number of small donations and bequests, chiefly for Bursaries. Notices of these will be found in the preceding pages, in the Histories of the University by Bower, Dalzel, and Grant, and in the Report of the Universities' Commissioners in 1830. A list of early Benefactors to the Library is given at p. 42

By Act 1 & 2 Vict., cap. 55, the various sums of money mortified in the hands of the Town Council for the support of the University, amounting to £13,119, were discharged, and an annual payment of £2500 since reduced to £2170, secured in terms of "The Edinburgh Corporation Stock Act, 1894," over the Common Good of the City, &c.

Within this century, but especially since 1860, many donations and bequests have been made by Benefactors of the University for the foundation of Fellowships, Scholarships, and Bursaries, for the endowment of Chairs, and for the erection of the New Buildings, including the great "M'Ewan Hall." As the University, however, is still very inadequately endowed, much requires to be done that it may not fall behind the requirements of the age. Intending Benefactors are respectfully reminded that additional CHAIRS, LECTURESHIPS, LABORATORY EQUIPMENTS, LIBRARY ENDOWMENTS, SCHOLARSHIPS, BURSARIES, and FUNDS for RESEARCH, for GENERAL MAINTENANCE, and for BUILDING, are urgently required. The

names of Benefactors, if so desired, may be connected with the Benefactions they bestow. Such Benefactions may simply be conveyed to the "University of Edinburgh." All necessary information will be gladly afforded by the Secretary of the University Court, the Secretary of Senatus, the Registrar, the Deans of the Faculties, or the University Librarian.

The following list includes the chief Benefactors of the present century, together with the purposes of their benefactions[1] :—

(A.)—*Founders of Bursaries in the present Century.*

Rev. J. STUART, South Carolina—Founder of the Stuart Bursaries.

Sir JOHN M'PHERSON, late Governor-General of India—Founder of the M'Pherson Bursary (now the Macpherson Scholarship).

Rev. R. BLAIR, D.D.—Founder of the Blair Bursaries in Arts and Theology.

J. STEWART HEPBURN, Esq. of Colquhalzie—Founder of three Theological Bursaries.

JOHN JAMIESON, Esq., Edinburgh—Founder of the Jamieson Bursary.

GEORGE PARKER BIDDER, Esq.—Founder of the Jardine Bursary.

WILLIAM LENNIE, Esq., Teacher, Edinburgh—Founder of the Lennie Bursaries.

JOHN BRUCE, Esq., Trinity Crescent, Edinburgh—Founder of the Bruce Bursaries.

M'DIARMID TESTIMONIAL TRUSTEES—Founders of the M'Diarmid Bursary.

W. PATRICK, Esq. of Roughwood—Founder of the Patrick Bursaries.

JAMES GRAY, Esq. of Baadpark—Founder of the Gray Scholarship.

EDINBURGH CAITHNESS ASSOCIATION—Founders of a Bursary.

EDINBURGH GALLOWAY ASSOCIATION—Founders of a Bursary.

AYRSHIRE CLUB—Founders of two Bursaries.

PEEBLESSHIRE SOCIETY—Founders of a Bursary.

Dr ABERCROMBIE, Cape Town—Founder of a Bursary.

Mrs MARGT. TYNDALL BRUCE of Falkland—Founder of Bursaries.

TRUSTEES of FRANCIS J. SCOTT, Esq. of Mount Lodge, Portobello—Founders of two Bursaries.

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[1] An Association exists for the purpose of keeping the Public informed regarding the existing insufficiency of the Endowments of the University of Edinburgh, collecting funds, and appropriating them to the further extension and better endowment of the University, and to other purposes tending to promote the efficiency of the University as a seat of learning.

The Chancellor of the University is President of this Association; the Hon. Secretary is Sir Alexander Christison, Bart.; and the Secretary is Robert G. Scott, Esq., W.S., 1 Forres Street, Edinburgh.

Miss HANNAH HARRISON of Lasswade—Founder of a Bursary.

Miss MARY ETTLES of Inverness—Founder of three Bursaries, and the "Ettles Medical Scholarship."

TRUSTEES of the Rev. JOHN SPENCE, Minister of Kinnaird—Founders of two Bursaries.

JOHN ROBERTSON SIBBALD, M.D.—Founder of Five Bursaries.

ARGYLLSHIRE, BUTE, and WESTERN ISLES ASSOCIATIONS—Founders of a Bursary.

SUBSCRIBERS to MEMORIAL to ROBERT STEWART, Esq. of Ardvorlich—Founders of a Bursary.

THE EDINBURGH BORDER COUNTIES ASSOCIATION—Founders of two Bursaries.

THE RIGHT HON. THOMAS, EARL OF ZETLAND—Founder of the Orkney and Zetland Bursary.

TRUSTEES OF JAMES GRIERSON, OF OGSCASTLE—Founders of the Grierson Bursaries.

TRUSTEES OF Dr MACKIE, Leith—Founders of Mackie Bursaries.

TRUSTEES OF J. CAIRNS, Esq., W.S.—Founders of the Cairns Bursary.

TRUSTEES OF Mrs JOHNSTONE of Harthope, Moffat—Founders of the Johnstone of Harthope Bursary,

TRUSTEES OF JAMES LAMBERT, Esq., Alloa—Founders of the Lambert Bursary.

ROBERT MARSHALL, Esq., Merchant, Edinburgh—Founder of the Marshall Bursary.

JOHN FOTHERINGHAM, Esq. of Heathpool—Founder of the Fotheringham and Forrest Bursaries.

Right Hon. LAWRENCE, EARL OF ZETLAND—Founder of the Zetland Bursaries.

ANDREW THOMSON, M.D.—Founder of Eight Bursaries in Arts, Divinity, Law, and Medicine.

EDINBURGH EAST LOTHIAN ASSOCIATION—Founders of a Bursary in Arts.

EDINBURGH UNIVERSITY ENDOWMENT ASSOCIATION—Donors of Bursaries in Arts.—Discontinued.

Mrs ISABELLA WEBSTER—Founder of the Webster Bursaries in Divinity.

Dr JOHN AITKEN CARLYLE—Founder of two Bursaries in the Faculty of Medicine.

Mrs ELIZABETH MACKENZIE—Founder of the Mackenzie Bursaries.

TRUSTEES OF Mrs BARBARA MACAULAY OF MYLNE—Founders of a Bursary in Divinity.

Trustees of Rev. John Patterson—Founders of a Bursary in Anglo-Saxon Grammar and Literature.

Thomas Carlyle—Founder of the John Welsh Bursaries in Mathematics and Classics.

Mrs Helen Anderson or Ronald, Liverpool—Founder of the Anderson Bursaries.

Subscribers to Testimonial to W. Mackinnon, Esq. of Balinakill—Founders of the Mackinnon Bursaries.

Trustees of James Whitelaw—Founders of Whitelaw Bursaries.

Trustees of William Renton, Esq.—Founders of a Bursary in Divinity, and one in Arts.

Miss Isabella Macdougall, Perth—Founder of the John and Isabella Macdougall Bursaries.

Robert Hunter, Esq., Dalhousie Chesters—Founder of two Bursaries in Divinity.

Robert Pillans Newton of Castlandhill and Drumcross—Founder of the Newton Bursaries.

Peter Campbell Mann of Seaham Harbour, Durham—Founder of a Bursary.

Charles Jardine of Thorlieshope—Founder of Bursaries in Arts.

Isaac Anderson Henry—Founder of the Anderson Henry Prize.

Mrs H. E. Morison—Founder of the Mackenzie (Stornoway) Bursary.

Daniel Maclaurin, Esq.—Founder of the Maclaurin Bursary.

Thomas Lockerby, Esq.—Founder of the Lockerby Bursary.

George Cousin, Esq.—Founder of the "Bailie Cousin Bursary."

Thomas Hill Pattison, M.D.—Founder of the Pattison Prize in Clinical Surgery.

Major Robert Orr Crichton of Lynn—Founder of the Crichton Bursaries in the Faculty of Medicine.

Rev. Thomas Maule—Founder of Maule's Bursaries.

Mrs A. B. R. Milner Fothergill of Hayton Quarry—Founder of the Milner Fothergill Gold Medal in Therapeutics.

Donald Fraser, M.D., London, and Association for the Better Endowment of the University—Founders of the Donald Fraser Bursary in Experimental Physics.

Subscribers to Memorial to Professor Kelland—Founders of Kelland Memorial Prize.

Governors of George Heriot's Trust—Founders of Bursaries in Arts, Science, and Medicine.

Dr Thomas Charles Hope, late Professor of Chemistry—Founder of the Hope Prize (now two Hope Scholarships).

Mrs Margaret Tyndall Bruce—Founder of Prize in Logic Class.

Daniel Ellis, Esq.—Founder of "The Ellis Prize" in the Faculty of Medicine.

John Edward Baxter, Esq., of Craigtay, bequeathed the reversion of his Estate for the purpose of founding Scholarships, etc.

Dr Neil Arnott gave £1000 for Promoting the Study of Experimental Physics among the Medical Students of the University.

Rev. Hew Scott of Wester Anstruther—Founder of the Scott and Dunbar Prize in Greek.

John Wilson, Esq. of South Bantaskine—Founder of the Robert Wilson Prize in Chemistry.

Mrs E. Wightman—Founder of the Wightman Prize in Clinical Medicine.

James George Beaney, Esq.—Founder of the Beaney Prize.

Andrew Robertson Cameron, M.D., of Richmond, New South Wales—Founder of the Cameron Prize.

John M'Cosh, M.D.—Founder of the M'Cosh Graduate's Bursary in Medicine.

Miss Jane Malin M'Master, Edinburgh—Founder of the M'Cosh Medical Bursary.

(B.)—*Founders of Scholarships or Fellowships in the present Century.*

The Pitt Club—Founders of two Scholarships, one in Arts and one in Divinity.

James Mackenzie, Esq., W.S.—Founder of Mackenzie Scholarship.

Alex. Henry Rhind, Esq. of Sibster—Founder of the Rhind Scholarships and Bursaries.

Sir David Baxter, Bart., of Kilmaron—Founder of the Baxter Scholarships in Arts and Science.

Sir William Fettes, Bart.—Founder of the Fettes Exhibitions.

John Maxton, Esq.—Founder of a Divinity Scholarship.

Miss Elizabeth Drummond—Founder of the Drummond Scholarship.

Mrs Margaret Tyndall Bruce—Founder of three Scholarships.

James Guthrie, Esq., of London—Founder of the Guthrie Fellowship.

Subscribers to Hamilton Memorial Fund, and Association for the Better Endowment of the University—Founders of a Philosophical Fellowship.

Association for the Better Endowment of the University—Founders of a Classical Fellowship.

Trustees of Dr J. H. Gilchrist—Founders of three Scholarships for Natives of India.

JOHN ROBERTSON SIBBALD, M.D.—Founder of a Medical Scholarship.

Miss MARY BAXTER, of Balgavies—Founder of Scholarships.

SUBSCRIBERS to FALCONER MEMORIAL FUND—Founders of a Fellowship.

SUBSCRIBERS to SYME FELLOWSHIP—Founders of a Fellowship in the Medical Faculty.

SUBSCRIBERS to GOODSIR MEMORIAL FUND—Founders of a Fellowship in the Medical Faculty.

Rev. JOSEPH TAYLOR GOODSIR bequeathed £900 to Supplement the Goodsir Memorial Fund.

ROBERT A. GOODSIR, M.D., Edinburgh, bequeathed residue of his Estate, amounting to about £2000, to supplement the Goodsir Memorial Fund.

TRUSTEES OF Mrs CHARLES MACLAREN—Founders of the Charles Maclaren Scholarship.

SUBSCRIBERS to GLOVER MEMORIAL FUND, and ASSOCIATION for the BETTER ENDOWMENT of the UNIVERSITY—Founders of the "Glover Divinity Scholarship."

Mrs M. ARNOTT, Widow of NEIL ARNOTT, M.D.—Founder of the "Neil Arnott Scholarship for Experimental Physics."

JOHN EDWARD BAXTER, Esq. of Craigtay, bequeathed the residue of his estate, out of which three Scholarships named after him have been founded by the University Endowment Association.

The Rev. DAVID AITKEN, D.D., formerly Minister of Minto—Founder of the Aitken Scholarship.

DAVID SKIRVING, Esq., of 13 Westbourne Park, London—Founder of the Skirving Scholarship for Moral Philosophy.

ANDREW THOMSON, M.D.—Founder of a Scholarship.

Misses KIDD of Woodhouse—Founders of the David Kidd Divinity Scholarship.

Dr R. H. GUNNING of Rio Janeiro—Founder of ten Prizes in the Faculty of Divinity, and of eleven Prizes in the Faculty of Medicine

Dr T. LECKIE—Founder of the Leckie-Mactier Scholarship.

SUBSCRIBERS TO MEMORIAL OF Dr COLDSTREAM—Founders of the Coldstream Memorial Medical Missionary Scholarship.

Mrs JAMES BUCHANAN—Founder of a Scholarship in Midwifery and Gynecology.

Dr ANDREW VANS DUNLOP, H.E.I.C.—Founder of the Vans Dunlop Scholarships in Arts, Law, and Medicine.

Misses STEVEN of Bellahouston—Founders of a Scholarship in Agriculture.

SUBSCRIBERS TO MEMORIAL OF Dr CHARLES MURCHISON—Founders of the "Charles Murchison Scholarship."

Mrs Mary Ann Scott or Thomson of Hawick—Founder of the James Scott Scholarship in Midwifery

Robert Mackay-Smith, Esq., Edinburgh—Founder of the Mackay-Smith Scholarships in Natural Philosophy and Chemistry.

Dr Frederick John Mouat—Founder of the Mouat Scholarship in Practice of Physic.

Dr John Stark, Auchtermuchty—Founder of the Stark Scholarship in Clinical Medicine.

Mrs Kidd—Founder of "James Fairbairn's Scholarship."

Miss Jane Jeffrey—Founder of the Jeffrey Scholarships.

Dr A. H. Freeland Barbour—Founder of the Freeland Barbour Fellowship.

Miss Matilda Johnston Cobb—Founder of the Cobb Divinity Scholarship.

Mrs Elizabeth Mackie or Trevelyan—Founder of Scholarships in Engineering and Mechanical and Useful Arts.

Mrs Muirhead—Founder of Prize in Civil Law Class.

Subscribers to Lorimer Memorial Fund and Association for the better Endowment of the University—Founders of the Lorimer Travelling Scholarship.

George Scott, Esq., Peckham, London—Founder of the Scott Travelling Scholarship, for purposes of Study or Research.

Governors of George Heriot's Trust—Founders of Fellowship in Arts and Pure Science.

Mrs E. Crozier or Nichol, Edinburgh—Founder of Scholarship in Natural Philosophy.

Trustees of the Earl of Moray—Founders of "The Earl of Moray's Endowment of £20,000" for Original Research.

Misses Margaret Keith Aytoun and Isabella Aytoun—Founders of the Edmondstone Aytoun Fellowship.

Mrs Jane Allan, widow of the late John Allan, M.D., H.E.I.C.S.—Founder of Fellowship in the Faculty of Medicine.

John M'Cosh, M.D.—Founder of "The M'Cosh Graduate's Bursary" in Medicine.

Miss Jane Maria M'Master—Founder of M'Cosh Medical Bursary.

J. M. Houldsworth, Esq. of Ayr, and other Trustees—Founders of "The Houldsworth Scholarship for Research in Pharmacology."

Miss Christian Thow of Craigmore, near Dundee—Founder of Scholarships in the Faculty of Law.

(C.) —*Founders of New Chairs, Contributors of Endowments to existing Chairs, or of Money, &c., to the University Funds, Library, &c., within the present Century.*

General JOHN REID—Founder of the Theory of Music Chair, who also bequeathed money to the Funds of the University.

General Sir JOSEPH STRATON—Bequest to the University Funds.

Sir JAMES ERSKINE, of Torry, bequeathed Pictures, Bronzes, and Marbles to the University. [Lent to the National Gallery.]

Sir WILLIAM PULTENEY—Founder of the Chair of Agriculture.

Dr WILLIAM THOMSON—Founder of the Thomsonian Lectureship in Mineralogy.

Sir GEORGE BALLINGALL, Professor of Military Surgery—Presented his Library to the University.

Dr W. P. ALISON, Professor of the Theory of Medicine—Presented his Medical Books to the University.

JOHN MUIR, D.C.L., LL.D., Edinburgh—Founder of Sanskrit Chair.

Sir DAVID BAXTER, Bart., of Kilmaron—Founder of the Chair of Engineering.

DAVID COWAN, Esq., of Auchendrane, bequeathed £1000 to the Association for Promoting the Endowment of the University.

Sir RODERICK IMPEY MURCHISON gave £6000 for the Endowment of the Chair of Geology.

J. O. HALLIWELL PHILLIPPS, Esq., presented his valuable Shakespearean Collection to the University.

ROBERT COX, Esq., W.S., bequeathed £5000 for general purposes and for completing the Dome of the University buildings.

Signor THEOPHILE BUCHER bequeathed his Music Library to the Chair of Music, and reversion of estate to found Scholarships in Music.

THE MERCHANT COMPANY OF EDINBURGH, and other Governors of George Watson's and Daniel Stewart's Hospitals—Founders of the Chair of Political Economy and Commercial Law.

Mr HENRY G. and Miss FRANCES WATSON—Donors of Fund for the "Watson-Gordon Professorship of Fine Art." The Deed of Foundation will be found in CALENDAR for 1873 74, p. 320.

Sir D. BAXTER, of Kilmaron, bequeathed £20,000 for the Extension of the University buildings, and £20,000 for the Further Endowment of the Chairs in the Faculty of Arts.

Miss BROWN, of Lanfine, presented a portion of the Minerals and Fossils which belonged to her father—to be called "The Waterhaugh Collection."

THE BELL TRUSTEES, who gave £6000 for the Endowment of the Bell Chair of the Theory, History, and Practice of Education. (En

dowment increased in 1886 by £4500, added by Educational Endowments Commission.)

JOHN B. BAILLIE, who transferred the collection of Arabic MSS., formed by Lieut.-Col. Baillie of Leys, to the University Library.

Dr DAVID LAING, bequeathed his MSS. to the University Library.

Mrs HODGSON, presented Works on Political Economy, collected by her late husband, Prof. Hodgson, to the University Library.

Dr VANS DUNLOP bequeathed £3000 to the General Fund of the University.

SUBSCRIBERS to the CELTIC CHAIR, by whom a fund of £14,000 was raised for the endowment of this Chair by the exertions of Professor Blackie.

Miss MARY DICK bequeathed a moiety of the residue of her estate to accumulate for twenty-one years from 1883, or till it shall amount to £10,000, for the Foundation of a Chair of Comparative or Surgical Anatomy, as considered most to be required.

SUBSCRIBERS of £500 and upwards to the "UNIVERSITY OF EDINBURGH BUILDINGS EXTENSION SCHEME":—[1]

Sir David Baxter of Kilmaron, Bart., by bequest, less Legacy Duty,	£18,000	0	0
William M'Ewan, Esq., LL.D., M.P.,	6,500	0	0
The Duke of Buccleuch and Queensberry, K.G., D.C.L., LL.D.,	4,000	0	0
The Magistrates and Council of the City of Edinburgh,	3,100	0	0
The Right Hon. the Earl of Moray,	2,525	0	0
The Right Hon. The Earl of Rosebery, LL.D.,	2,400	0	0
The Royal College of Physicians of Edinburgh,	1,575	0	0
The Right Hon. the Earl of Stair, K.T.,	1,500	0	0
Messrs John Jeffrey & Co.,	1,500	0	0
J. Fulton, Esq., Clinton Road,	1,150	0	0
Charles Andrew Aitchison, Esq., Queen Street,	1,050	0	0
The Most Hon. the Marquis of Bute,	1,000	0	0
Andrew Carnegie, Esq., New York and Pittsburg,	1,000	0	0
The Right Hon. the Earl of Derby,	1,000	0	0
J. R. Findlay, Esq., Rothesay Terrace,	1,000	0	0
The Right Hon. The Earl of Home,	1,000	0	0
The Right Hon. The Earl of Hopetoun,	1,000	0	0
Sir William Stirling-Maxwell of Pollok and Keir, Bart., LL.D., M.P.,	1,000	0	0

[1] See Statement of Funds in Calendar, 1889-90, Appendix, p. 22.

The Rt. Hon. The Earl of Wemyss and March, LL.D.,	£1,000	0	0
The Right Hon. the Lord Justice-General Inglis, D.C.L., LL.D., Chancellor of the University, -	800	0	0
Messrs Thomas Nelson & Sons, - - -	800	0	0
Henry George Watson, Esq., C.A., - - -	800	0	0
The Most Hon. the Marquis of Lothian, - -	750	0	0
The Society of Writers to the Signet, - - -	750	0	0
J. Lindsay Bennet, Esq., Taviton Street, London. -	710	0	0
James Cowan, Esq., Royal Terrace, - - -	700	0	0
Robert Richardson, Esq., Bruntsfield Place, - -	700	0	0
C. Morrison, Esq. of Islay, - - - -	700	0	0
Charles Jenner, Esq., - - - - -	650	0	0
David Anderson, Esq. of Moredun, - - -	600	0	0
James H. Renton, Esq., Park Lane, London, -	600	0	0
Professor Sir W. Turner, LL.D., D.C.L., - -	600	0	0
His Grace The Duke of Devonshire - - -	500	0	0
Charles Cowan, Esq., of Logan House, - -	500	0	0
T. R. Buchanan, Esq., M.P., - - - -	500	0	0
P. D. Swan, Esq., Provost of Kirkcaldy, - -	500	0	0
Lady Campbell of Garscube, - - - -	500	0	0
The late William Cumming, Esq., M.D., Ainslie Place.	500	0	0
The late James T. Gibson-Craig, Esq., York Place, -	500	0	0
Professor Crum Brown, - - - -	500	0	0
The Goldsmiths' Company of London, - -	500	0	0
Sir W. Mackinnon, Esq., of Balinakill and Loup, -	500	0	0
Graham Menzies, Esq. of Hallyburton, - -	500	0	0
John Graham Menzies, Esq., Grosvenor Crescent, -	500	0	0
W. D. Menzies, Esq., Grosvenor Crescent, - -	500	0	0
Miss Trail, Aberlady, - - - - -	500	0	0
Messrs William Younger & Co., Abbey Brewery, -	500	0	0
The Right Hon. The Earl of Zetland, - - -	500	0	0
Anonymous, - - - - - -	500	0	0

The total amount of subscriptions received was £149,048, 2s. 5d.

EARL OF ROSEBERY provided £50 a year for Lectureship on Philosophy of Natural History for five years.

WILLIAM F. CUMMING, M.D., presented a Drinking Fountain, erected in the Quadrangle of the Old Buildings, in 1886.

JOHN HOPE, W.S., presented a Drinking Fountain to the University New Buildings, 1886.

Alex. Gibson, Esq., Advocate, bequeathed £2000, free of legacy-duty, to the General Fund of the University.

William M'Ewan, Esq., LL.D., M.P., donor of the M'Ewan Hall, at a cost including balance paid for Site and Grand Organ of about £115,000.

Adam Gifford, Senator of the College of Justice, bequeathed £25,000 for the foundation of a Lectureship for promoting, advancing, teaching, and diffusing the study of Natural Theology in the widest sense of that term.

John Fulton, Esq., bequeathed £3000 to General University Fund, the greater part of which has been devoted to the equipment of the new Engineering Laboratory, called the "Fulton Laboratory."

Miss Elizabeth Steven, of Bellahouston—Founder of the Steven Lectureship in connection with the Chair of Agriculture.

Alexander Low Bruce, Esq., Edinburgh, £5000
Mrs A. L. Bruce, £500
Miss A. Blackwood Bruce, £500
Other members of the Bruce family, £163
John Usher, Esq., of Norton, £8000
William Younger & Co., £1000
} Founders of "the Bruce and John Usher Chair of Public Health" in the Faculties of Medicine and Science.

Sir William Fraser, K.C.B., LL.D.—

1. For foundation of Chair or Professorship to be called "The Sir William Fraser Professorship of Ancient History and Palæography," £25,000.
2. For Library purposes, £10,000.
3. Half of Residue of Estate for general purposes, but especially for Foundation of Bursaries, &c., in connection with History, or for promoting Historical Research, expected to amount to about £15,000.

James Ritchie, Esq., bequeathed £3000 for University purposes.

Highland and Agricultural Society, £971, 6s. 7d., and Royal Scottish Arboricultural Society, £584, 3s. 10d., — for further Endowment of a Chair or Lectureship in Forestry.

£50 from C. Junghenn, Rangoon, towards foundation of Chair of Forestry.

Vote of £80 by the Edinburgh School of Rural Economy towards Lectureship of Agricultural Chemistry.

Dr Philip Nelson, Annan, bequeathed £84, 12s. 3d. to University Building Fund.

Sir William Overend Priestley, M.P., £1000 towards cost of redecorating the Library Hall.

Thomas M'Kie, £100 towards improving Students' Reading Room.

Hon. Bouverie Primrose bequeathed £100 for Original Research and £100 for Library.

The Subscribers, for founding a Classical Library in memory of Professors Sellar and Goodhart.

The Subscribers, for founding a Departmental Library in Philosophy.

Miss Carrick Moore presented to the Geological Class Library, a set of the publications of the Palæontographical Society, the property of her late father, John Carrick Moore, Esq., F.R.S., F.G.S., of Corsewall, Wigtownshire.

Miss Eleanor A. Ormerod, F.E.S., Collection of Entomological Diagrams prepared by her late sister.

Professor Gwatkin, D.D., Cambridge, mounted specimens of Molluscan Radulæ for microscope.

Professor Kirkpatrick, founder of the History Library.

Bequests and Donations during 1898-99.

I. *Bequests.*

£1500 by the late Mrs Jane Allan, for founding competitive Fellowships in the Faculty of Medicine.

£991 by the late Rev. Dr John Walker, formerly Professor of Natural History in the University, for University Library and College Museum.

II. *Donations.*

Benefaction by John Usher, Esq., of Norton, for the building and equipment of a Laboratory and Class-Rooms in connection with Chair of Public Health.

£500 by the Hon. John Macgregor, member of the Legislative Council of Burmah, towards endowment of Chair of Forestry.

Grants in aid of Forestry instruction in the University—1. Government Grant, £100. 2. Highland and Agricultural Society, £50.

£80 by School of Rural Economy towards Lectureship in Agricultural Chemistry.

Gift by Lord Playfair of a portrait of his father, the late Lord Playfair, Professor of Chemistry in the University from 1858 to 1869.

Gift by General George G. Pearse, C.B., of Portrait of the late Dr John Wylie, C.B., of the Madras Medical Service.

Further gift by the Rev. Professor H. M. Gwatkin, D.D., Cambridge, of a collection of Molluscan Radulæ.

Donation of £100 by Professor C. P. Tiele, Gifford Lecturer, 1896 to 1898, for the purchase of works on modern and constitutional history and political science for the History Library of the University.

Bequests and Donations to Library.

The Duc de Loubat—Don Ignacio Borunda, Clave général de Jeroglé-ticos Americanos; Il Manoscritto Messicano Borgiano del Museo Etnografico. Riprodotto in foto-cromografia.

The Earl of Crawford—Catalogue of English Broadsides, 1595-1897. Autotype facsimiles of three mappemondes. 2 vols.

Sir William Muir—The Old and New Testaments Tourát, Zubúr and Gospel. Agra Correspondence during the meeting; Cyprian: his life and teaching, &c.

Sir Dyce Duckworth—The influence of character and right judgment in medicine. Harveian Ovation, 1898.

Sir J. D. Marwick—The river Clyde and the harbour of Glasgow.

Lady Meux—The life and exploits of Alexander the Great. The Ethiopic texts, &c., ed. by E. A. Wallis Budge. 2 vols. The lives of Mabâ' Sĕyôn and Gabra Krĕstos. The Ethiopic texts, &c., ed. by E. A. Wallis Budge.

Lord Elphinstone—The Elphinstone Family Book of the Lords Elphinstone, Balmerino, and Coupar, by Sir W. Fraser. 2 vols.

Professor J. Cossar Ewart—The Penycuik Experiments.

Professor Engelmann—Ekkehard von J. V. von Scheffel. 34ste Aufl.

Professor Sir T. Grainger Stewart—The Good Regent: a Chronicle Play.

Professor Prothero—Choix de Chroniques et mémoires sur l'histoire de France xv^e siècle.

Professor Hastie—Theology as Science, &c.

Professor Seth—The Scottish Contribution to Moral Philosophy.

Professor Poulton—Hope Report. Vol. I.

Professor Saintsbury—A short history of English literature.

Dr J. Burgess—The Gandhara Sculptures, with notes on the age of the sculptures, &c.; An introduction to Arithmetic, 1858; Nalopâkhyânam, or the Tale of Nala: Kusumañjalih, by Udayana, and other works.

Dr W. Adams—On the surgical treatment of deformities; On contraction of the fingers; A sketch of the principles and practice of subcutaneous surgery; and other volumes.

Dr John Masson—Samos and Samian Coins by Percy Gardner.

Dr J. Finlayson—An account of the Life and Works of Dr Robert Watt.

Dr J. C. Simpson—Cerebral and mental symptoms in relation to somatic disease, &c.

Dr V. Magnan—Recherches sur les centres nerveux, &c.; On Alcoholism, translated by W. S. Greenfield; Leçons cliniques sur les maladies mentales.

Dr E. Doyen—Technique chirurgicale and E. Doyen et G. Roussel. Atlas de Microbiologie.

Rev. John Willcock—A Shetland Minister of the 18th century.

Mr William Baird—Annals of Duddingston and Portobello.
Mr W. J. Pentland—A number of medical works.
Mr R. Latta—The monadology and other philosophical writings of Leibniz.
Miss Cruikshank—A Memoir of Professor John Cruikshank.
Mr Charles Ellis—Shakespeare and the Bible.
Mr F. A. Crisp—List of Parish Registers and other genealogical works.
Mr J. Burleigh—Bam Wildfire, by Helen Mathers.
Messrs Dent & Co.—The *Spectator*, ed. by G. Gregory Smith.
Mr F. Wells Williams—The Life and Letters of Samuel Wells Williams, missionary and sinologue.
Mr J. C. Hackett—A sketch of the Life and public services of W. A. Richardson.
Mr A. Douglas Thompson—Euripides and the Attic orators.
Miss C. Maclagan—A catalogue raisonné of the British Museum Collection of Rubbings from ancient sculptured stones.
Mr J. W. Norton-Kyshe—The History of the Laws and Courts of Hong Kong.
Messrs W. & R. Chambers—*Chambers' Journal*, 1898.
Messrs J. & A. Churchhill—*Medical Directory*, 1898.
British Museum Catalogue, from the Trustees of the British Museum.
University of Pennsylvania—The Babylonian Expedition, and other works.
Rev. S. F. Hotchkin—Memoir of Rev. James Montgomery.
Rev. Dr D. Somerville—St Paul's Conception of Christ (Cunningham Lecture).
Rev. E. P. Newton—Panjábi Grammar.

ABSTRACT OF THE ACCOUNTS OF
The University of Edinburgh
FOR THE YEAR ENDING 31ST AUGUST 1898.

CAPITAL.

I. General University Fund :—						
Funds at beginning of year					£68,931	18 8
Deducted during year—						
Excess of Expenditure over Revenue for year					402	17 7
					£68,529	1 1
II. Funds partly or wholly unappropriated to particular purposes :—						
Funds at beginning of year			£126,510	8 1		
Added during year—						
Further payment on account of Legacy by the late Dr Philip Nelson to the University Building Fund	£5	0 0				
Surplus of Revenue over Expenditure for year	192	10 0				
			197	10 0		
					126,707	18 1
III. Funds appropriated to Particular Purposes other than Bursaries, Scholarships, Fellowships, and Prizes :—						
Funds at beginning of year			£132,410	1 1		
Added during year—						
Contributions of £500 from the Hon. John Macgregor, and of £50 from Mr C. Junghenn, towards endowment of the Lectureship in Forestry	£550	0 0				
Bequest by the late Dr John Walker for the purposes of the University Library and the Natural History Museum	991	10 1				
Carry forward,	£1,541	10 1	£132,410	1 1	£195,236	19 2

Brought forward,	£1,541 10 1	£132,410 1 1	£195,236 19	
Contributions of £10 from Lord Lister, £5 from Sir W. O. Priestley, and £5, 5s. from Dr J. Turnbull Smith, for cataloguing and other purposes in the University Library . .	20 5 0			
Surplus on Pension Fund .	2,106 13 1			
Surplus of Revenue over Expenditure . . .	876 16 4			
		4,545 4 6		
			136,955 5	

IV. Funds for Bursaries, Scholarships, Fellowships, and Prizes:—

Funds at beginning of year . . .		£346,954 18 1		
Added during year—				
Bequest by the late Dr John M'Cosh, for the foundation and endowment of a Bursary in the Faculty of Medicine . . .	£5,115 19 10			
Bequest by the late Miss Jane Maria M'Master, for the foundation and endowment of a Bursary in the Faculty of Medicine . . .	375 0 0			
Payment on account of Bequest by the late Mr James Beattie, for the foundation and endowment of Bursaries	97 7 0			
Sum received from Dr Gunning, being unapplied interest on Bond for £5000 granted by him in favour of the University, for the institution of Medical Prizes, which are presently paid by Dr Gunning through his own Agents . . .	91 16 0			
Surplus of Revenue over Expenditure	1,996 19 8			
		7,677 2 6		
			354,632 0	
Carry forward,			£686,824 5	

Brought forward,		£686,824 5 4

V. ESKBANK FEU-DUTIES—CASUALTY FUND.

Fund at beginning of year	£274 8 4		
Added during the year :—			
Surplus of Revenue over Expenditure for year	34 16 8		
		309 5 0	
Total Funds at 31st August 1898			£687,133 10 4

NOTE.—The above Funds are stated at their book value or cost price. The market value of the Funds at the 31st August 1898 exceeded the book value by £42,034, 17s. 3d. No notice is taken above of the University Buildings, New Medical School, Music Class Room, and Principal's Official Residence, or of the Library, Museums, and Furnishings of the University, as the values of these are not known.

REVENUE AND EXPENDITURE.

I. GENERAL UNIVERSITY FUND.

Revenue.		Revenue.	Expenditure.
1. Matriculation Fees		£2,891 3 6	...
2. Entrance Fees from Students not matriculated		15 15 0	
3. Fees in lieu of Matriculation Fees		82 19 0	
4. Preliminary Examination Fees		362 2 6	
5. Graduation Fees :—			
(1) Arts	£807 9 6		
(2) Science	244 1 0		
(3) Medicine	6,332 19 6		
(4) Divinity	78 4 0		
(5) Law	77 13 6		
(6) Music	7 7 0		
		7,547 14 6	
6. Fees of Registration of Members of General Council		296 0 0	
7. Fees of Access to Library		47 5 0	
8. Income from Accumulations of the General University Fund		2,206 12 1	
9. Income from Funds bequeathed for general purposes :—			
(1) Straton Fund	£433 15 8		
(2) Cox Fund	69 7 10		
(3) Gibson Fund	64 14 2		
		567 17 8	
Carry forward,		£14,017 9 3	£ ..

				Revenue.			Expenditure		
	Brought forward,			£14,017	9	3	£	..	
10.	Income from Funds partly appropriated to particular purposes, the Surplus Income of which falls to general purposes :—								
	(1) Leith Harbour Annuity Fund	£657	12 11						
	(2) Reid Fund . . .	510	10 3						
	(3) Baxter Fund . .	47	16 11						
				1,216	0	1			
11.	Income from Funds specifically appropriated by Deed of Endowment to Class Expenses:—								
	(1) Fund for Chair of Engineering . .	£23	4 0						
	(2) Fund for Chair of Geology . . .	45	10 10						
	(3) Fund for Chair of Fine Art	40	16 10						
	(4) Fund for Chair of Commercial and Political Economy . . .	74	0 0						
	(5) Gilchrist Fund for purchase of apparatus .	79	15 0						
				263	6	8			
12.	Income from Parliamentary Grant . .			25,870	0	0			
13.	Income from Endowment of Chairs in the Faculty of Divinity			252	8	2			
14.	Surplus on Fee Fund			1,755	15	6			
15.	Royalty from Publisher of University Calendar			100	0	0			
16.	Fees from Societies for Use of Rooms, &c. .			26	7	0			
				£43,501	6	8			

Expenditure.

1.	Expenses of Administration :—								
	(1) University Court			..			£936	17	4
	(2) Senatus Academicus			...			1,798	18	2
	(3) General Council			...			234	2	5
	(4) Curators of Patronage			...			15	15	0
	(5) Editing University Calendar . . .			...			50	0	0
	(6) Students' Representative Council . .			...			35	0	0
	(7) Factor			...			885	1	4
	(8) Law Agents			...			42	17	10
	(9) Auditor			...			50	19	0
	Carry forward,			£43,501	6	8	£4,049	11	1

				Revenue.			Expenditure.		
	Brought forward,			£43,501	6	8	£4,049	11	1
2.	Salaries to Principal and Professors :—								
	(1) Salary to Principal in accordance with Section III. of Ordinance No. 27 of the Scottish Universities Commissioners	£1,048	17 10						
	(2) Salaries to Professors in accordance with Section VII., Sub-section 1 (*b*), of said Ordinance .	4,285	6 2						
	(3) Salaries to Professors in accordance with Section VII., Sub-section 2, of said Ordinance . .	1,438	14 0						
	(4) Salaries to Professors in accordance with Sections IX. and XI., Sub-section 2 (*d*), of said Ordinance . . .	3,542	0 0						
	(5) Salaries to Professors in the Faculty of Divinity in accordance with Section XI., Sub-section 2 (*e*), of said Ordinance	452	8 2						
							10,767	6	2
3.	Provision for Pensions to Retired Professors .						5,000	0	0
4.	Upkeep of Buildings :—								
	(1) Buildings and Furnishings	£4,490	14 9						
	Less Donation from Sir W. O. Priestley towards cost of decorating the Library Hall . .	1,000	0 0						
		£3,490	14 9						
	(2) Lighting, Heating, and Cleaning . . .	1,175	13 7						
	(3) Public Burdens and Feu-Duties . . .	461	1 6						
	4) Insurance . . .	220	0 6						
							5,347	10	4
5.	Equipment and Upkeep of Library . .						2,574	1	5
6.	Equipment and Upkeep of Museums . .						415	0	0
7.	Equipment and Upkeep of Laboratories, including Class Expenses						2,606	12	9
	Carry forward,			£43,501	6	8	£30,760	1	9

	Revenue.	Expenditure.
Brought forward,	£43,501 6 8	£30,760 1 9
8. Lecturers and Assistants		8,981 15 0
9. Examiners		2,533 3 11
10. Service		1,091 14 8
11. Class Medals and Prizes		284 16 8
12. Graduation Expenses		197 2 3
13. Incidental Expenses and Grants		55 10 0
	£43,501 6 8	£43,904 4 3
Deduct Transfers to other Funds	10,724 0 2	10,724 0 2
Carried to Abstract	£32,777 6 6	£33,180 4 1

II.—Fee Fund Account and Salaries Account:—

	Revenue.	Expenditure.
1. Fee Fund Account	£23,744 3 6	£23,744 3 6
2. Fees collected for Professors and Lecturers not falling into Fee Fund	485 2 0	485 2 0
3. Salaries Account	9,396 3 2	9,396 3 2
	£33,625 8 8	£33,625 8 8
Deduct Transfers to other Funds	1,755 15 6	1,755 15 6
Carried to Abstract	£31,869 13 2	£31,869 13 2

III.—Funds Partly or Wholly Unappropriated to Particular Purposes:—

	Revenue.	Expenditure.
1. Annuity under the Edinburgh Corporation Stock Act, 1894	£1,687 1 0	£1,687 1 0
2. Reid Fund	1,513 16 11	1,513 16 11
3. Reid Professorship of Music, Assistants, and Expenses Fund	520 0 0	344 17 3
4. Straton Fund	433 15 8	433 15 8
5. Cox Fund	69 7 10	69 7 10
6. Gibson Fund	64 14 2	64 14 2
7. University Building Fund	17 7 3	...
	£4,306 2 10	£4,113 12 10
Deduct Transfers to other Funds	3,139 7 5	3,139 7 5
Carried to Abstract	£1,166 15 5	£974 5 5

IV.—Funds appropriated to particular purposes other than Bursaries, Scholarships, Fellowships, and Prizes:—

	Revenue.	Expenditure.
1. Baxter Salary Fund	£583 13 6	£583 13 6
2. Bell Chair of Education	355 16 8	355 16 8
Carry forward,	£939 10 2	£939 10 2

	Revenue.	Expenditure.
Brought forward,	£939 10 2	£939 10 2
3. Celtic Chair	505 10 0	505 10 6
4. Lectureship in Procedure and Evidence	100 0 0	100 0 0
5. Chair of Commercial and Political Economy	524 0 0	524 0 0
6. Chair of Engineering, viz. :—		
(1) Fund for Professor's Salary	193 6 8	193 6 8
(2) Fund for Expenses of the Chair	23 4 0	23 4 0
7. Chair or Lectureship on Forestry	221 1 0	221 1 0
8. Gilchrist Fund	79 15 0	79 15 0
9. Gifford Lectureship	732 9 10	170 19 6
10. Muir Chair of Sanskrit	228 3 4	228 3 4
11. Murchison Chair of Geology, viz. :—		
(1) Fund for Professor's Salary	181 0 6	181 0 6
(2) Fund for Expenses of the Chair	36 3 8	36 3 8
12. M'Ewan Hall	354 11 5	354 11 5
13. Nichol Foundation	48 7 8	48 7 8
14. Pulteney Chair of Agriculture	39 5 6	39 5 6
15. Chair of Public Health	394 6 6	...
16. Pension Fund	5,247 4 6	3,140 11 5
17. Steven Lectureship on Agriculture	90 12 6	90 12 6
18. Thomson Funds, viz. :		
(1) Fund for Salary of Professor of Natural History.	37 9 0	37 9 0
(2) Fund for Expenses of Chair of Geology	9 7 2	9 7 2
19. Watson Gordon Professorship of Fine Art., viz. :		
(1) Fund for Professor's Salary	426 9 4	426 9 4
(2) Fund for Expenses of the Chair	40 16 10	40 16 10
20. Library Fund	...	79 0 0
21. Lectures on Agricultural Chemistry	80 0 0	80 0 0
22. Chair of Conveyancing	105 0 0	105 0 0
	£10,637 14 7	£7,654 5 2
Deduct Transfers to other Funds	3,678 2 1	3,678 2 1
Carried to Abstract	£6,959 12 6	£3,976 3 1

V.—FUND FOR BURSARIES, SCHOLARSHIPS, FELLOWSHIPS, AND PRIZES:—

	Revenue.	Expenditure.
1. Aitken Scholarship	£98 1 10	. .
2. Ardvorlich Bursary	15 9 4	£15 9 4
3. Neil Arnott Prize	36 5 0	36 5 0
4. Neil Arnott Scholarship	33 4 6	33 4 8
Carry forward,	£183 0 8	£84 19 0

	Revenue.	Expenditure.
Brought forward,	£183 0 8	£84 19 0
5. Baxter Mathematical and Philosophical Scholarships	122 17 6	122 7 1
6. Baxter Natural and Physical Science Scholarships	147 8 2	36 18 0
7. Misses Baxter of Balgavies Scholarships	158 10 3	112 13 2
8. John Edward Baxter Scholarships, viz.:—		
(1) Fund for Scholarships	242 0 8	242 0 6
(2) Fund for Examiners' Fees	11 14 5	...
9. Bruce of Grangehill and Falkland Bursaries and Scholarships	449 17 5	484 2 4
10. Beaney Prize	31 8 4	33 16 8
11. Buchanan Scholarship	39 3 0	38 18 2
12. Buchanan Bursary	22 1 6	22 1 6
13. Bucher Scholarship	118 18 0	116 0 0
14. Bayne Bursary	24 3 4	24 3 4
15. Brown Bursaries	24 3 4	24 3 4
16. Blair Arts Bursary	9 6 0	9 6 0
17. James Beattie's Bursaries	0 8 7	24 7 3
18. Cairns Bursary	18 7 4	18 7 4
19. Cameron Prize	89 13 0	6 6 0
20. Dr John Aitken Carlyle's Medical Bursaries	54 2 8	54 2 8
21. Cousin Prize	14 13 10	14 1 8
22. Bailie Cousin Bursary	27 1 4	27 1 4
23. Cobb Scholarship	30 4 2	21 16 2
24. Crichton Bursaries, and Scholarships	1,007 15 10	445 10 0
25. Drummond Scholarship, viz.:—		
(1) Fund for Scholarship	90 15 6	89 6 0
(2) Fund for Examiners' Fees	6 8 1	...
26. William Dickson Travelling Fund	87 0 0	102 5 0
27. Dundas Bursaries	42 10 8	41 0 10
28. Dalgleish and Macmorran Bursary	13 8 4	13 8 4
29. Edinburgh University Endowment Association's Arts Bursaries	120 0 0	100 0 0
30. Ettles' Divinity Scholarships	100 1 8	91 17 9
31. Ettles' Medical Scholarship	30 4 2	...
32. Ellis Prize	30 6 10	88 10 2
33. Falconer Memorial Fellowship, viz.:—		
(1) Fund for Fellowship	110 4 0	110 4 0
(2) Fund for Examiners' Fees	4 2 2	...
34. Fothringham and Forrest Bursaries	38 6 2	28 14 10
35. James Fairbairn Scholarship	32 17 4	32 17 4
36. Freeland Barbour Fellowship	48 6 8	...
37. Fraser Bursaries	42 1 0	42 1 0
38. Donald Fraser Bursary	49 6 0	49 6 0
Carry forward,	£3,672 17 11	£2,752 12 9

		Revenue.	Expenditure.
	Brought forward,	£3,672 17 11	£2,752 12 9
39.	Ford Bursaries	32 4 6	32 4 6
40.	Glover Divinity Scholarship	33 7 8	...
41.	Gray Scholarships	84 14 10	83 5 2
42.	Guthrie Fellowship	83 1 5	83 1 6
43.	Grierson Bursaries	320 4 2	287 9 0
44.	Gunning Scholarships	1 18 0	...
45.	Gunning Medical Prizes	13 7 11	
46.	Gunning Divinity Prize	7 15 9	...
47.	Goodsir Memorial Prize.	122 13 9	33 12 4
48.	Hamilton Philosophical Fellowship, viz.:—		
	(1) Fund for Fellowship	82 8 2	82 8 2
	(2) Fund for Examiners' Fees	4 9 9	...
49.	Harrison Bursary	25 7 6	25 16 10
50.	Hope Prize	76 10 2	67 13 4
51.	Robert Hunter Bursaries	34 10 2	...
52.	Houldsworth Scholarship	44 9 4	44 9 4
53.	Jardine Bursary	42 3 0	42 3 0
54.	Jardine of Thorlieshope Bursaries	272 19 7	181 17 11
55.	Johnston of Hetthope Bursary	15 14 2	15 14 2
56.	Jeffrey Scholarships	134 14 0	99 2 3
57.	Robert Johnston Bursaries	54 7 6	33 4 7
58.	Archibald Johnstone Bursary	12 13 6	12 13 6
59.	David Kidd Divinity Scholarship	34 16 0	17 8 0
60.	Kelland Memorial Prize	4 9 2	4 9 2
61.	General Lang's Bequest	15 9 4	...
62.	Lockerby Bursary	30 19 8	30 19 8
63.	Lorimer Travelling Scholarship	38 13 4	
64.	Leckie Mactier Fellowship	77 6 8	38 13 4
65.	Leighton and Struthers Bursary	22 12 2	22 12 2
66.	Charles Maclaren Scholarship, viz.:—		
	(1) Fund for Scholarship	111 4 9	54 2 8
	(2) Fund for Examiners' Fees	7 14 8	...
67.	Maxton Scholarship	40 19 9	40 19 8
68.	Mackenzie Classical Scholarship	104 5 3	93 9 5
69.	Macpherson Bursaries	83 8 2	83 16 9
70.	Marshall Bursary	31 8 4	31 8 4
71.	Mackenzie Bursaries in Anatomy	36 17 1	36 17 0
72.	Mackinnon Bursaries	58 18 0	68 14 11
73.	Mann Bursaries	78 16 4	51 11 4
74.	Mackie Bursaries	58 0 0	58 0 0
75.	Maclaurin Bursary	63 7 9	...
76.	Maule Bursaries	82 13 0	82 13 4
77.	Milner Fothergill Prize	9 13 4	15 0 0
78.	Muirhead Prize	15 2 0	22 13 0
	Carry forward,	£6,179 7 6	£4,630 17 1

		Revenue.			Expenditure.		
	Brought forward,	£6,179	7	6	£4,630	17	1
79.	M'Lurg and Penman Bursary	19	13	2	7	14	8
80.	Miller Bursary	23	4	0	23	4	0
81.	Mitchell and Shortt Bursary	21	6	0	21	6	0
82.	Mackenzie (Stornoway) Bursary	26	2	0	26	2	0
83.	Moray Foundation	628	6	8	618	15	0
84.	Mouat Scholarship	53	7	4	40	4	1
85.	M'Cosh Graduate's Bursary	65	8	9	13	18	8
86.	M'Cosh Medical Bursary	4	15	10		...	
87.	Newton Bursaries	85	11	0	73	11	2
88.	Nairne Bursary	16	2	4	16	2	4
89.	Prizes in Sanskrit		...		3	3	0
90.	Philosophy Honours Exhibition	40	0	0	20	0	0
91.	Pitt Club Classical Scholarship	56	11	0	54	9	0
92.	Pitt Club Theological Scholarship	96	12	3	96	12	2
93.	Patrick Bursaries	146	9	10	145	7	6
94.	Pattison Bursary	10	11	5	10	3	0
95.	Patterson Bursary	15	11	8		...	
96.	Bailie John Penman Bursary	14	5	2	14	5	2
97.	Rev. John Penman High School Bursaries	8	0	6		...	
98.	Pringle and Wardrop Bursary	14	10	5		...	
99.	Rhind Scholarships	162	12	10	162	12	10
100.	Renton Bursary in Arts	19	6	8	18	5	8
101.	Renton Bursary in Divinity	19	6	8	19	6	8
102.	Ramsay Bursary in Arts	10	14	10	10	14	10
103.	Ramsay Bursary in Divinity	16	2	4		...	
104.	Ritchie Scholarships	78	17	8	78	17	4
105.	Horsliehill Scott Bursary	64	8	0	32	4	0
106.	Shaw Philosophical Fellowship	135	2	0	135	1	10
107.	Steven of Bellahouston Scholarship	70	1	8	70	1	8
108.	Syme Surgical Fellowship, viz. :—						
	(1) Fund for Fellowship	96	0	6		...	
	(2) Fund for Examiners' Fees	8	14	0		...	
109.	Scott and Dunbar Prize	27	8	4	26	8	4
110.	Dobbie Smith Prize	4	17	6		...	
111.	Mackay Smith Scholarships, viz. :—						
	(1) Fund for Scholarships	96	13	4	108	15	0
	(2) Fund for Examiners' Fees	3	17	4		...	
112.	Stark Scholarship	54	2	8		...	
113.	James Scott Scholarship	36	5	0	37	7	0
114.	Stewart Bursaries	34	16	0	17	8	0
115.	George Scott Scholarship	32	18	0	31	8	4
116.	Tarsappie Bursary	5	0	6		...	
117.	Trevelyan Scholarship	30	3	2	15	1	8
118.	Trotter and Penman Bursary	12	9	6	12	9	6
	Carry forward,	£8,545	15	4	£6,591	17	6

	Revenue.	Expenditure.
Brought forward,	£8,545 15 4	£6,591 17 6
119. Vans Dunlop Scholarships	2,293 16 8	2,323 8 2
120. Wightman Prize	13 1 8	11 12 0
121. Robert Wilson Prize	7 15 8	9 0 2
122. Webster Bursaries	125 6 10	91 0 6
123. John Welsh Bursaries	195 14 2	218 0 10
124. Whitelaw Bursaries	68 15 2	45 16 8
125. King William III. Bursaries	50 0 0	12 10 0
126. Weir, Jenkins, Hepburn, and Lightbody Bursary	11 0 2	11 0 2
127. Wight, M'Call, and Christie Bursary	12 12 4	12 12 4
Carried to Abstract	£11,323 18 0	£9,326 18 4

VI. Eskbank Feu-Duties—Casualty Fund:—

	Revenue.	Expenditure.
Total amount of Feu-Duties and Expenditure therefrom	£514 5 1	£479 8 5
Deduct transfer to other Funds	461 1 2	461 1 2
Carried to Abstract	£53 3 11	£18 7 3

Abstract of Revenue and Expenditure.

	Revenue.	Expenditure.
I. General University Fund	£32,777 6 6	£33,180 4 1
II. Fee Fund Account and Salaries Account	31,869 13 2	31,869 13 2
III. Funds partly or wholly unappropriated to particular purposes	1,166 15 5	974 5 5
IV. Funds appropriated to particular purposes other than Bursaries, Scholarships, Fellowships, and Prizes	6,959 12 6	3,976 3 1
V. Funds for Bursaries, Scholarships, Fellowships, and Prizes	11,323 18 0	9,326 18 4
VI. Eskbank Feu-Duties—Casualty Fund	53 3 11	18 7 3
Total Revenue and Expenditure,	£84,150 9 6	£79,345 11 4

The University Court.

ABSTRACT OF THE PROCEEDINGS OF THE UNIVERSITY COURT, FROM 1ST MAY 1898 to 1ST MAY 1899.

MONDAY, 16TH MAY 1898.—The Minutes of last Meeting were submitted and approved.

It was reported that intimation of the vacancy in the Chair of Biblical Criticism and Biblical Antiquities, the patronage of which is vested in the Crown, had been made to the Secretary for Scotland, and that receipt had been acknowledged. It was agreed to alter the date of Professor Charteris' retirement from 16th to 31st curt.

It was reported that, under the Standing Orders of the Court, authority had been granted to present a petition to the Dean of Guild Court for approval of the plans agreed upon by the University Field Committee for the erection of a pavilion on the University Field.

It was intimated that a grant of £50 by the Highland and Agricultural Society towards the Lectureship in Forestry for the current year had been received. Receipt was intimated of £50, being a contribution towards the Forestry Chair Fund, from Mr C. Junghenn, Rangoon, forwarded through Dr John Nisbet, Conservator of Forests, Eastern Circle, Upper Burmah.

The Court approved of the following representation made by the General Council of the University:—"That the Spring Meeting of the Council be in future held on the first Wednesday of May, instead of on the first Tuesday after the 14th of April."

It was agreed to alter the Regulations for the administration of the University Field to the effect of adding to the membership of the Field Committee, as at present constituted, an additional Graduate of the University to be elected by the Field Committee, and a representative of the Students' Representative Council to be elected by the Council.

A statement of the University's proportion of the expenses incurred in connection with the Joint Board of Examiners of the Scottish Universities for the year ended 31st January last was submitted and approved. A further statement of the fees payable to Examiners for the Preliminary, M.A., and other examinations of March and April last was submitted and approved.

The Finance Committee reported that they had authorised payment of various accounts, awards of scholarships, &c.

The Works Committee submitted their half-yearly report as to expenditure on general repairs and jobbing work on the University Buildings. Various recommendations of the same Committee were approved.

It was intimated that copies of reports by Committees of the General Council, as approved by the Council, had been received.

MONDAY, 13TH JUNE 1898.—The Minutes of last Meeting were submitted and approved.

There were submitted copies of Orders by Her Majesty in Council, of date 19th May 1898, approving of the following Ordinances of the Scottish Universities Commission:—No. 157 [St Andrews, No. 24—Institution of Boards of Studies in the Faculty of Medicine]; No. 158 [St Andrews, No. 25—Regulations for Degrees in Medicine, supplementary to Ordinance No. 45]; No. 159 [St Andrews, No. 26—Regulations as to Fees, supplementary to Ordinance No. 50]; No. 160 [General, No. 39—Regulations for Degrees in Arts, supplementary to Ordinances Nos. 11, 44, and 148]; No. 161 [St Andrews, No. 27—Patronage of Chairs in University College, Dundee]; No. 162 [St Andrews, No. 28—Regulations with regard to Matriculated Students, supplementary to Ordinance No. 147]; No. 163 [St Andrews, No. 29—Professorships and Lectureships in University College, Dundee]; No. 164 [St Andrews, No. 30—Regulations as to University Meetings]; No. 165 [St Andrews, No. 31—Foundation of Lectureship in Forensic Medicine and Public Health in University College, Dundee]; No. 166 [St Andrews, No. 32—Annual Report by Council of University College, Dundee]; No. 167 [General, No. 40—Regulations for Higher Degrees in Arts and Science, supplementary to Ordinance No. 62]; No. 168 [General, No. 41—Regulations for Degrees in Arts, supplementary to Ordinances Nos. 11, 44, 148, and 160]; No. 190 [Edinburgh, No. 28—Foundation of Chair of Public Health].

With reference to the last of these Ordinances, it was agreed to make the appointment to the Chair of Public Health at next meeting of the Court on 18th prox. In connection therewith a letter was read from a benefactor of the University, who desires that for the present his name should be withheld, intimating that he is prepared to give to the University such a sum as may be necessary (but not exceeding £10,000) to build and equip a laboratory and class-room to be used exclusively for the teaching of Public Health in connection with this Chair—the site of the proposed building to be provided by the University. The Court, in thanking the donor for the munificence of his gift, resolved to record their gratification that it had taken a form which enabled the University to extend its usefulness by providing it with an Institute which was urgently required for promoting the study of Public Health.

Principal Sir William Muir having intimated the resignation of his Office as a representative of the Court on the Joint Administrative

Board of Agriculture, it was agreed to fill up the vacancy by the appointment of Professor Crum Brown.

It was intimated that Mr R. Greig Smith, B.Sc., had resigned the Additional Examinership in Agricultural Chemistry on his appointment as "Macleay Bacteriologist" to the Linnæan Society, New South Wales.

A Report by the Committee on the Medical Education of Women was submitted and approved.

An application by the Scottish Association for the Medical Education of Women for renewal of Recognition, for next academical year, of the Medical College for Women, Minto House, Chambers Street, was granted.

It was agreed to renew the appointment of Dr C. G. Knott as University Lecturer on Applied Mathematics for a further period of five years from 1st October next.

Various Reports by the Business and Law, Finance and Works Committees were approved.

Monday, 18th July 1898.—The Minutes of last Meeting were submitted and approved.

A report by the Senatus under Ordinance 11, section xxii., was submitted.

On the recommendation of the Senatus, the Court approved of various grants from the Earl of Moray Endowment for purposes of original research. The gift by Lord Playfair of a portrait of his late father was accepted with thanks to the donor.

An application by Professor A. Francis Dixon, M.B., University College, Cardiff, for Recognition as an Extra-Academical Teacher whose courses of instruction in Anatomy (systematic and practical) qualify for Graduation in Medicine, was granted.

The Court appointed Mr James Tweeddale to be University Janitor and Mace-bearer as from 1st prox., in room of Mr John Chapman, resigned.

A draft Deed of Mortification for establishing the Mouat Scholarship in connection with the Class of Practice of Physic was submitted and approved.

The Court approved of a Scheme for providing increased accommodation for the Departments of Pathology and Bacteriology.

The Court after consultation with the Senatus, agreed to institute in the University a Lectureship in Diseases of Tropical Climates.

Dr Charles Hunter Stewart, University Assistant in Medical Jurisprudence and Public Health, was unanimously appointed to the Bruce and John Usher Chair of Public Health.

The recommendations by the respective Professors as to the appointment of University Assistants for next academical year, which had been received up to the date of meeting, were approved, and such of them as are University Lecturers were continued in their Office as Lecturers for the same period.

Professor Chrystal and Dr Charles Sarolea were appointed to represent the University in Mathematics and Dynamics and in Modern Languages, respectively, on the Joint Board of Examiners of the Scottish Universities for the year from 1st February next. The appointment of the University's representatives in English and in Classics was delayed.

MONDAY, 17TH OCTOBER 1898. The Minutes of last Meeting were submitted and approved.

The Senatus reported that Professors Charles Hunter Stewart, M.B., D.Sc. ; James Seth, M.A. ; and the Rev. John Patrick, D.D., having presented their Commissions, were duly inducted as Members of the Senatus Academicus.

On the recommendation of the Senatus, the Court appointed Mr William Murray, one of the University Servitors, to be Warder at the Old University Buildings.

Various appointments to University Lectureships and Assistantships were made for the current academical year.

It was agreed to recognise the M'Gill University, Montreal, as a University whose medical degree qualifies for purposes of graduation in Science in Public Health, under Ordinance 35, section ii.

Mr Thomas M'Kie, Advocate, was appointed a representative of the Court on the Library Committee.

The appointment to the Additional Examinerships in English and Classics was delayed till next meeting. As regards Classics, it was agreed that two Additional Examiners (instead of one as at present should be appointed, each for a term of four years.

The Report of the Finance Committee on Lectureships, Assistants and Class Expenses for the current academical year was submitted, adjusted and approved.

A report by the Works Committee on applications for the use of the M'Ewan Hall was approved.

Receipt was intimated of £500 towards the Forestry Chair Fund, being a donation by the Hon. John Macgregor, Rangoon, forwarded through Dr John Nisbet, Conservator of Forests, Eastern Circle, Upper Burmah.

Various reports by the Finance and Works Committees were submitted and approved.

MONDAY, 14TH NOVEMBER 1898. The Minutes of last Meeting were submitted and approved.

Reports by the Senatus under Ordinance 11, section xiii. (1) and section xxii., and Ordinance 12, section x., were submitted.

Mr Oliver Elton, B.A., Withington, Manchester, was appointed Additional Examiner in English for a period of four years. Mr Francis R. Jamieson, M.A., Glasgow, and Professor E. A. Sonnenschein, Mason University College, Birmingham, were appointed Additional Examiners in Classics for a period of four years. Mr Elton was ap-

pointed Representative of the University in English, and Mr Jamieson Representative of the University in Classics, on the Joint Board of Examiners of the Scottish Universities for the year from 1st February next. Professor Ernest Gardner and Dr John Wyllie were appointed Additional Examiners in Classical Archæology and in Medicine in its bearings on Public Health respectively, for three years from 1st January next. Mr John Row-Fogo and Mr D. M. Westland, C.E., were appointed Additional Examiners in Political Economy and in Engineering respectively, for a further period of two years from 1st January next.

Applications by Drs Harvey Littlejohn and W. G. Aitchison Robertson for an extension of Recognition in Medical Jurisprudence and Public Health to the close of the current session was granted.

The Court approved of leave of absence being given to the Professor of Materia Medica, Dr Thomas R. Fraser, on his appointment as President of the Commission nominated by Government to inquire into the plague in India. The proposed teaching arrangements in the Materia Medica Department during his absence were approved.

Various reports by the Finance and Works Committees were submitted and approved.

MONDAY, 12TH DECEMBER 1898.—The Minutes of last Meeting were submitted and approved.

It was intimated that the Senatus had re-elected Professor Butcher as an Assessor in the University Court for four years from 29th current.

On the recommendation of the Senatus it was agreed that the Course of eighty lectures in Arabic be recognised as qualifying for Graduation in Arts, and that the Ordinary Course of Senior Arabic be recognised as a half course qualifying for the same purpose.

On the recommendation of the Senatus, the title of Research Fellow was conferred on Charles Chilton, M.A., M.B., D.Sc., who had been admitted as a research student.

Dr John Gibson was appointed Additional Examiner in connection with a thesis submitted for the degree of D.Sc.

It was agreed to recognise the University of Manitoba, whose degree of B.A. qualifies for purposes of Graduation in Divinity.

Dr J. G. Cattanach was appointed a tutor in Clinical Medicine in room of Dr Welsh, resigned.

Certain proposed alterations in the Departments of Forensic Medicine and Public Health were approved.

The following gentlemen were recognised as Extra-Academical Teachers whose Courses qualify for Graduation in Medicine:—1. James Adam Terras, B.Sc., Edinburgh (Botany); 2, Professor Christopher Addison, M.D., Sheffield (Anatomy); 3, S. C. Mahalanobis, B.Sc., as substitute for the Professor of Physiology, University College, Cardiff.

Grants from the Moray Endowment for Research were made to Dr John Beard, and conjointly to Dr T. H. Milroy and Dr John Malcolm.

The Right Hon. the Lord Justice-General was re-elected a Curator of Patronage for three years from 26th February next.

The Finance Committee's Report on the University Accounts for 1897-98 and estimates for 1898-99 was submitted and approved.

A report by the Committee on the John Usher Institute of Public Health was submitted and approved. The Court were much gratified by the announcement made in the report that the increased expenditure found to be necessary for the erection and equipment of the Institute would be borne by Mr John Usher of Norton, and resolved to record in the Minutes an expression of their thanks.

Intimation was made of the gift by the Rev. Professor H. M. Gwatkin, D.D., Cambridge, of a further collection of Molluscan radulæ. The gift was accepted with thanks to the donor.

The Report as to Statistics for 1897-98 to the Secretary for Scotland was submitted and approved.

Various reports by the Finance, Business and Law, and Works Committees were considered and approved.

MONDAY, 10TH JANUARY 1899. The Minutes of last Meeting were submitted and approved.

The fee for the Class of Physiological Chemistry was fixed at £1, 1s. in the case of students who have previously attended the class of Practical Physiology in the University and paid the class fee of £3, 3s.; and at £2, 2s. in the case of students who have not attended the class of Practical Physiology in the University, and wish to attend the Class of Physiological Chemistry for the first time.

The Finance Committee submitted the Report on the State of the Finances for 1897-98 under section XXX. of the Universities (Scotland) Act, 1889. On the recommendation of the Business and Law Committee, the Court approved generally of the clauses (2) whereby the General Medical Council propose to amend the Medical Acts in order to obtain additional penal and disciplinary powers. They were, however, of opinion that the second clause should be so altered as to make it clear that a practitioner whose name has been erased from the Medical Register shall be deemed to be deprived of his degree only in so far as it confers a qualification to practise. The Court were of opinion that the enactment should be expressly confined to the case of medical practice.

On reports by committees, the Court appointed Additional Examiners as follows:—1. Mr Charles M. Douglas, M.A., D.Sc., Edinburgh (Logic and Metaphysics and Moral Philosophy); 2. the Rev. Alexander Stuart Martin, M.A., B.D., Scone, and the Rev. William B. Stevenson, M.A., B.D., Bala (Divinity, for the degree of B.D.); 3. Mr J. S. Taylor Cameron, M.A., LL.B., Advocate, Edinburgh (Civil Law, Public Law, and Constitutional Law and History); and Mr James A. Hope, M.A., LL.B., W.S., Edinburgh (Scots Law, Conveyancing, and Forensic Medicine; 4. Mr John Alan Murray,

B.Sc., University College, Aberystwyth (Agricultural Chemistry); 5. Mr R. Stewart MacDougall, M.A., D.Sc., Edinburgh (Agricultural Entomology; 6. Mr J. R. Ainsworth Davis, M.A., University College, Aberystwyth (Zoology).

On the recommendation of the Senatus, the Court approved of an Honours Course of instruction in Political Economy, qualifying for Graduation in Arts with Honours in Economic Science, and fixed the fee at £3, 3s. for the whole course, or £2, 2s. for each half-course if taken separately.

Dr John Gibson was appointed an Additional Examiner in connection with a thesis submitted for the Degree of D.Sc.

On the recommendation of the Senatus, the Court approved of a course of lectures in Public Health and Sanitary Science, qualifying for graduation in Science in Public Health, and fixed the fee for the Course at £4, 4s.

Mr C. F. Myers Ward, University College, Sheffield, was recognised as an Extra-Academical Teacher in Physiology, whose course of instruction therein qualifies for graduation in Medicine.

It was reported that Mr G. Wardlaw Burnet, Advocate, had resigned his Office as a University Lecturer in International Private Law, on his appointment as Sheriff-Substitute of Aberdeen, Kincardine, and Banff. It was agreed to advertise the vacancy.

It was also reported that Dr James Carmichael had resigned his Office as University Lecturer on Diseases of Children.

Intimation was made of a donation of £100 by Professor C. P. Tiele, late Gifford Lecturer, for the purchase of works on modern and constitutional history and political science for the History Library of the University. The gift was received with thanks to the donor.

Various reports submitted by the Finance and Works Committees were approved.

Monday, 13th February 1899.—The Minutes of last Meeting were submitted and approved.

The Court approved of the Report of a committee regarding the Supplementary Regulations for the University Library proposed by the Library Committee.

On a report by a committee appointed to consider the qualifications of Candidates for the vacant Lectureship in International Private Law, the Court appointed Mr N. J. D. Kennedy, Advocate, Edinburgh, to the Lectureship for a period of three years from 1st ult.

A report by the Senatus under Ordinance No. 11, sections xiii. (1) and xxii. was submitted.

On the recommendation of the Senatus, the Court approved of the following Courses of Lectures in History being given by the University Assistant in History, Mr D. P. Heatley, viz.: (1) A course of fifty lectures on British History, to be held during the ensuing summer session—the fee to be £2, 2s.; (2) a course of fifty lectures on

European History, to be held during next winter session, at the same fee.

With regard to the Lectureship in Diseases of Tropical Climates instituted on 18th July last, the Court resolved to invite applications, by advertisement, for the Office of Lecturer, and remitted to a committee to consider and report as to the qualifications of the Candidates; the first appointment to be for a period of three years, which may be renewed. The following are the regulations pertaining to the Lectureship:—"1. The course of instruction shall extend over not less than twenty or more than twenty-five lectures, and shall consist of lectures and demonstrations, and other practical work, the number of meetings for each to be arranged by the Senatus. 2. The class fee for the course shall be £2, 2s., with an entrance fee of 5s. in the case of non-matriculated students. 3. Two such courses shall be given in each year, one in the winter and the other in the summer session, should a course in each session be required. 4. Each course of instruction shall be open to (1) Qualified Medical Practitioners; (2) Students who have completed the curriculum for the Final Examination in Medicine of any of the qualifying medical authorities; and (3) Others specially interested in the subject. 5. Certificates of attendance will be granted as follows:—(*a*) A class certificate to each member of the class who has performed the work of the class in a satisfactory manner; (*b*) a University certificate to be signed by the Dean of the Faculty of Medicine, to each member of the class who has attended a Course of instruction on Practical Bacteriology, including the micro-organisms of tropical diseases, who has also attended the Course of instruction in Tropical Diseases, and who has performed the work of both of these classes in a satisfactory manner. This certificate shall be based on evidence received from the Teachers on Practical Bacteriology and Tropical Diseases."

Grants recommended by the Senatus from the Earl of Moray Endowment for the purposes of research were approved.

The following were recognised as Extra-Academical Teachers whose Courses of instruction qualify for Graduation in Medicine in the University:—(1) Professor W. E. F. Thomson, Anderson's College Medical School, Glasgow (Physiology; (2) John Macpherson, M.D., Larbert (Mental Diseases).

It was agreed to give the loan for one year of the Admiralty Charts, now in the University Library, to the Royal Scottish Geographical Society, it being considered that these Charts might, with advantage to the public, be thus transferred to the premises of the Society, where they would be more accessible to those who might require to consult them.

Various Reports submitted by the Business and Law, Finance and Works Committees, were approved.

MONDAY, 13TH MARCH 1899.—The Minutes of last Meeting were submitted and approved.

The Court approved of an addition proposed by the Students' Representative Council to the laws embodied in the Constitution of the Council.

On a report by the Committee appointed to consider the qualifications of candidates for the Lectureship in Diseases of Tropical Climates, the Court appointed Dr Andrew Davidson, Edinburgh, to the office for a period of three years from 1st May next.

Reports by the Senatus, under Ordinance 11, sections xiii. (1) and xxii., were submitted.

The Court resolved, after consultation with the Senatus, that next Rectorial Election should take place on Saturday, 4th November 1899.

Professor Adamson, Glasgow, was appointed Additional Examiner in connection with a thesis submitted for the Degree of D.Phil.

The Court approved of the arrangements proposed by the Senatus under which Dr E. W. Carlier should carry on the work of the Chair of Physiology until the end of the current session, and also, in conjunction with the Additional Examiner, the work in connection with the ensuing examinations in Physiology, for Graduation in Medicine, and Science.

There was read an excerpt from the Will of the late Professor Rutherford, bequeathing to the University the diagrams and microscopical specimens in the Department of Physiology, which belonged to him, and all his books on Physiology, Histology, Anatomy, &c.

The Court, on the recommendation of the Senatus, resolved to institute a Lectureship in Diseases of the Skin, and appointed Dr W. Allan Jamieson, Edinburgh, as University Lecturer in the subject. In connection therewith, the Court approved of a recommendation of the Senatus that, in addition to the two courses, one of which Candidates for Medical Degrees are required to attend, there be a further option of "a course of clinical instruction in Diseases of the Skin, given by a University Lecturer or by a Recognised Teacher at not less than twenty meetings in the wards of a recognised hospital, or in the wards of a hospital and in a dispensary, both recognised for the purpose."

On the recommendation of the respective Professors, the Court appointed Mr W. M. Gloag, Advocate, Edinburgh, as University Assistant in Scots Law for next academical year; and Dr John Stevenson, Edinburgh, as Junior Demonstrator of Surgery for the remainder of the current year, in room of Dr James Gray, who is to resign at the end of the current session.

Intimation was made of the following bequests to the University:—(1) By the late Mrs M. A. Shaw, Ventnor, of £100, to be designated "The Dr Shaw Gift"; (2) by the late Emeritus-Professor Sir John Struthers, of anatomical drawings.

Various reports submitted by the Business and Law, Finance and Works Committees, were approved.

Miscellaneous.

I. Examinations of Candidates for the Army.—1. Graduates in Arts or in Science of this University, or anyone who has passed the Examinations for either of these degrees are eligible for Commissions in the Army. The limit of age is 17 to 23.

2. Students of this University who have passed "the Examination of Candidates for the Army," are also eligible for Commissions. They are required to attend one class in each of the following three Departments—viz., (*a*) Latin or Greek; (*b*) Logic or Moral Philosophy, or Rhetoric and English Literature; (*c*) Mathematics or Natural Philosophy,—and to pass the Examination on the M.A. standard, in the three subjects in which they have attended classes. The limit of age in this case is 17 to 22.

Candidates for Certificates must enter their names and pay the Fees at the *Matriculation Office* at the same time as the Candidates for the M.A. Examinations. The Fee for the Examination is two guineas.

II. Subjects of Examination for Students of Divinity and Candidates for License by Presbytery of Edinburgh.

Examination mainly in writing. An average of not less than 50 per cent. over all the subjects is necessary. Examinations held in the Examination Hall of the University.

1. *For Students entering the Divinity Hall.*—(1) Biblical Knowledge.—Genesis to 2 Samuel, and the Four Gospels; (2) The Shorter Catechism.

2. *For Students entering on their Second Year.*—(1) Latin.—Augustine—Enchiridion; (2) Greek.—The Epistle to the Colossians as in Lightfoot; (3) Hebrew.—Davidson's Grammar, 1-31; Genesis, i.-ix.; (4) Divinity.—Confession of Faith, 1-15; Flint's Theism; Row's Manual of Christian Evidences; (5) Biblical Knowledge.—1 Kings to Nehemiah, and Acts of the Apostles; (6) Church History.—History of the Church to 325 A.D.

3. *For Students entering on their Third Year.*—(1) Latin.—Anselm—Cur Deus Homo; (2) Greek.—St John's Gospel to be read critically, with discussions as to date and authorship; (3) Hebrew.—Davidson's Grammar, 32-49; Psalms i.-xv.; (4) Divinity.—Confession of Faith, 16-33; The Trinity; The Person of Christ; (5) Biblical Knowledge.—The Psalms and Isaiah; (6) Church History.—The Reformation Period, with special reference to Scotland.

4. *For Candidates for License.*—Scriptures of the Old and New Testaments, and History and Doctrine of the recognised Standards of the Church of Scotland.

GEORGE T. JAMIESON, *Cl. Presb. Edin.*

III. THE EDINBURGH UNIVERSITY UNION. — *President*—H. M. Mackenzie. *Hon. Secretary*—H. Crichton Miller, M.A. *Assistant Secretary*—H. N. Fletcher. *Treasurer*—James Walker, C.A., 25 Frederick Street. The *Committee of Management* consists of representatives from the *Senatus*, the *General Council*, and the *Student Members*.

The Union is open to all Students and Graduates of the University, and its purpose is "the provision and maintenance of means of social and academic intercourse for its members." The Building, which was erected and equipped at a cost of nearly £16,000, includes a large hall (in which Lectures are given, and debates are held weekly during the Winter Session), luncheon, smoking, reading-rooms, and billiard-room, is situated near both the old and the new buildings. The reading-room is amply supplied with newspapers, and with the weekly, monthly, and quarterly periodicals, both British and American; the billiard-room is furnished with two billiard tables, and the library contains University and Class Text-Books. Among Books of Reference is the latest edition of the Encyclopædia Britannica.

Terms of Membership.—By payment of an entry-money of 5s. and an Annual Subscription of 10s. 6d. if a Matriculated Student, or £1, 1s. if a Graduate, University Assistant, or Lecturer.

Affiliated Societies.—E. U. Union English Public Schools Club; University of Edinburgh Photographic Society.

Many other University Societies have been granted certain privileges for the transaction of Business in the Union.

Full particulars as to affiliation, &c., on application to the Secretary at the Union.

SUMMARY OF SYLLABUS OF LECTURES AND DEBATES, 1899-1900.

Lectures (strictly reserved for members) 28th October, 13th January, and 17th March.

Joint Debate with Glasgow University Union (at Edinburgh)—"That the present Government is unworthy of the Confidence of the Country," 15th December.

Hat night, 10th March.

Ordinary Debates, 4th, 11th, 18th, and 25th November, 2nd and 9th December, 13th, 20th, and 27th January, 3rd, 10th, 17th, and 24th February, and 3rd March.

IV. STATISTICS OF THE RECTORIAL ELECTIONS, 1859-1896.

1859.—*Gladstone*, 642.—*Neaves*, 527. Matriculated students, 1302.
1862.—*Gladstone* (*unopposed*). Matriculated students, 1331.
1865. *Carlyle*, 657.—*Disraeli*, 310. Matriculated students, 1288.

1868.—*Moncreiff*, 607.—*Ruskin*, 425. Matriculated students, 1398.
1871.—*Maxwell*, 594.—*R. Palmer*, 502. Matriculated students, 1533.
1874. *Derby*, 770. *Playfair*, 583. Matriculated students, 1767.
1877.—*Hartington*, 932.—*Cross*, 684. Matriculated students, 2102.
1880.—*Rosebery*, 1024.—*Christison*, 985. Matriculated students, 2490.
1883.—*Northcote*—*Blackie*—*Trevelyan*. Matriculated students, 2660.
1886.—*Aberdeigh*, 1094. *Playfair*, 747. Matriculated students, 2680.
1887.—*Lothian* (*unopposed*). Matriculated students, 2493.
1890.—*Goschen*, 1378.—*Russell*, 805. Matriculated students, 3038.
1893.—*Rosebery*, 1145. *Reay*, 728. Matriculated students, 2649.
1896.—*Balfour*, 990.—*Haldane*, 771. Matriculated students, 2414.

V. Royal Medical Society, Edinburgh, 7 Melbourne Place. Founded 1737. Royal Charter granted 1778. *Presidents*—R. F. M'Nair Scott, M.A., M.B.; C. M. Cooper, M.B., C.M.; P. T. Herring, M.B., C.M.; G. F. B. Simpson, M.B., Ch.B. *Secretaries*—J. H. Rhodes, M.B., Ch.B., and F. I. Rose, M.B., Ch.B. *Treasurer*—J. R. Young, Esq. *Sub-Librarian*—A. P. Ormiston.

The Society meets in its hall every Friday evening during the Winter at 9 o'clock. At these meetings dissertations on medical subjects are read and debated, and communications by members on subjects of interest discussed. The Society possesses a very fine library, containing about 30,000 volumes, which is constantly being added to, the catalogue of which was brought up to date in 1896. There are comfortable writing and reading-rooms with all the medical journals and periodicals, books of reference and text-books specially useful to students reading for examinations. The museum contains a complete collection of Materia Medica specimens, microscopic sections, pathological preparations, herbarium, and a surgical model, on which bandaging, setting of fractures, &c., may be practised.

VI. International-Academic Committees. A Committee appointed by the Senatus consisting of Professor Kirkpatrick (*Convener*), The Principal, Professors Chrystal, Eggeling, Sir L. J. Grant, Bart. (Secretary of Senatus), Dr Schlapp, Dr Sarolea, and the International-Academic Committee of the Students' Representative Council, will be happy to give every assistance in their power to Foreigners desirous of studying in the University of Edinburgh, and to Edinburgh University Students desirous of studying in foreign universities. Inquiries may be addressed to either of these Committees.

VII. Association for the Better Endowment of the University of Edinburgh. *President*—The Right Hon. Arthur James Balfour, D.C.L., LL.D., M.P., Chancellor of the University. *Vice-Presidents*—The Right Hon. The Earl of Wemyss, LL.D.; The Right Hon. The Earl of Stair, K.T.; The Right Hon. The Earl of Rosebery, K.G., K.T., LL.D.; Principal Sir William Muir, K.C.S.I., D.C.L., LL.D.

Ordinary Members of Committee—The Right Hon. John B. Balfour, Q.C., LL.D., M.P.; R. Fitzroy Bell, Esq., Advocate; A. W.

Black, Esq.; John Boyd, Esq.; Sir Thomas J. Boyd; Professor Crum Brown, M.D.; Professor Butcher, LL.D.; John Carment, Esq., LL.D., S.S.C.; Professor Chiene, F.R.C.S.E.; D. Christison, Esq., M.D.; The Hon. Lord Rutherfurd Clark, LL.D.; Sir Thomas Clark, Bart.; Archibald Constable, Esq.; Henry Cook, Esq., W.S.; Charles Cook, Esq., W.S.; Donald Crawford, Esq., Advocate; The Hon. Lord Stormonth-Darling, LL.D.; John Duncan, Esq., M.D.; The Rev. Archibald Fleming; John Harrison, Esq.; James Hope, Esq., W.S.; A. Taylor Innes, Esq., Advocate; The Right Hon. Lord Kinnear, LL.D.; J. E. J. G. Mackay, Esq., LL.D., Advocate, Sheriff of Fife; Sir Andrew Mure; Charles Robertson, Esq., B.C.S.; Professor Seth Pringle Pattison, LL.D.; Robert Simson, Esq., B.C.S.; George Smith, Esq., LL.D., C.I.E.; James Walker, Esq. of Dalry. *Hon. Secretary*—Sir Alexander Christison, Bart., M.D. *Secretary*—Robert G. Scott, W.S., 1 Forres Street, Edinburgh.

Local Honorary Secretaries—A. Mercer Adam, Esq., M.D., Boston, Lincolnshire; Sir Dyce Duckworth, M.D., 11 Grafton Street, Piccadilly, London; Peter Gardner, Esq., W.S., 153 St Vincent Street, Glasgow; A. F. Hutchison, Esq., Stirling; James Tait, Esq., W.S., Kelso.

Terms of Membership—Life Subscription, One Guinea; no annual subscription. All friends of the University are invited to become members.

VIII. University Societies and Clubs.

i.—The Agricultural Society. Established 1858. *Honorary President*—Professor Wallace. *President*—S. F. Ashby, B.Sc. *Vice-President*—Colin Story. *Secretary*—G. M. Fraser. *Treasurer*—H. C. Long.

The Society meets weekly during the Winter Session, the day and hour being arranged at the first meeting in each session.

ii. Associated Societies of the University. This Association was instituted in 1833, and is a Union of Literary and Debating Societies. It is composed at the present date of five societies:—The Dialectic, Scots Law, Diagnostic, Philomathic, and Celtic Societies. The following is the list of the Office-Bearers of the Association, and of the respective component societies:—

Honorary President—The Right Honourable the Earl of Rosebery. *Hon. Vice-Presidents*—The Senatus Academicus of the University (*ex officiis*). *Secretary*—J. Campbell Irons, jr., 10 Royal Terrace.

(1.) Dialectic Society of Edinburgh. Instituted in 1787. *Presidents*—Messrs K. N. Knox, O. B. Milligan, C. B. Milne, V. Caldwell, G. A. Fraser. *Hon. Secretary*—Mr W. D. D. Bowden. *Hon. Treasurer*—Mr S. G. Kerr.

The Society meets in the Associated Societies' Hall every Thursday evening at 8 o'clock, for the prosecution of Literary and Philosophical Composition, Criticism, and Debate.

(2.) Scots Law Society. Instituted in 1815. *Presidents*—G. M. Crawford, S.S.C.; John A. Robson, M.A., LL.B.; and J. A. T. Robertson, M.A., LL.B., Advocate. *Secretary*—Robert S. Carmichael, Solicitor, 27 Scotland Street. *Assistant-Secretary*—J. Cousin Stevens, S.S.C., 130 George Street. *Treasurer and Librarian*—John G. Spens, M.A., LL.B., 50 George Street.

This Society meets every Monday evening during the Winter Session, at 8.30 o'clock, in the Associated Societies' Hall, University, for the purpose of debating Legal Questions and reading Essays.

(3.) The Diagnostic Society. Instituted in 1816. *Presidents*—E. L. Wilson, A. S. Fraser, G. Hart, J. G. Spens. *Hon. Secretary*—D. Hay Thorburn, 1 John's Place, Leith. *Treasurer*—T. Fraser.

This Society meets every Tuesday evening, at 8.30 o'clock, beginning on Tuesday, 31st October 1899, for the purpose of debating and reading Essays.

(4.) Philomathic Society. Instituted in 1858. *Presidents*—A. Graham Donald; W. C. A. Ross, M.A.; H. C. Norman. *Secretary*—M. F. Simpson, 15 Spottiswoode Street. *Assistant-Secretary*—Andrew Smith. *Treasurer*—G. Douglas Veitch, B.A.Oxon.

This Society meets in the Societies' Hall every Friday evening during the Winter Session, at 8 P.M., for the purposes of debate and essay-reading; and is open to all who are, or have been, Matriculated Students of the University of Edinburgh.

(5.) Celtic Society. Instituted 1848. *Honorary President*—Professor Mackinnon. *Presidents*—W. Hamilton, M.A., J. F. Munro, J. A. F. Dean, M.A. *Secretary*—Neil Ross, to whom all correspondence should be addressed, Associated Societies' Hall, University Buildings. *Assistant-Secretary*—D. M'Lean. *Treasurer*—J. M'Nab.

This Society meets every Saturday evening during the Winter Session, at 7 o'clock P.M., in the Associated Societies' Hall. Students from Northern Counties cordially invited. Next Session begins on Friday, 20th October.

iii.—Athletic Club. *President*—D. B. King. *Vice-President*—A. K. Smith-Shand. *Hon. Secretary*—K. M. Sutherland Graeme. *Treasurer*—C. E. W. Macpherson, C.A. *Sectional Secretaries*—1. Football (Rugby)—J. Geikie. 2. (Association)—Ewan Cameron. 3. Cricket—J. S. Bostock. 4. Boat Club—A. J. Campbell. 5. Lawn Tennis—J. H. Thornley. 6. Golf—J. Livingstone. 7. Boxing—W. F. Brayne. 8. Hare and Hounds—N. N. Wade.

Open to all Members and Graduates of the University, and to Members of the Extra-Mural School.

All communications should be addressed to the Hon. Secretary, E.U. Athletic Club, University Union.

iv.—Caithness Students' Association. Instituted in 1856. *Honorary President*—His Grace the Duke of Portland. *President*—W. Keith Tait. *Secretary*—Alexander Cunnison. *Treasurer*—W. P. Gillieson.

This Association meets fortnightly, in the Education Class Room, on Saturdays, at 8 P.M., during the Winter Session, for the purpose of debating, for reading Essays, and for the advancement of education in Caithness.

v.—Chemical Society. Instituted 1874. *President*—Professor A. Crum Brown, M.D., D.Sc. *Vice Presidents*—Leonard Dobbin, Ph.D.; W. W. Taylor, M.A., B.Sc. *Librarian* J. P. Longstaff. *Secretary*—John Webster, Chemical Laboratory. *Treasurer*—P. P. Chalmers.

This Society holds fortnightly meetings, at 8 P.M., in the University Union, during the Winter Session, for the reading and discussion of papers on Chemistry and allied Sciences. Visitors welcome.

Excursions to Chemical Works, &c., during the Sessions.

vi.—Dumfriesshire and Galloway Literary Society. Instituted 1847. *Presidents*—R. Affleck, 10 Livingston Place; J. D. Ker, 107 Marchmont Road; Wm. Forsyth, 18 Warrender Park Terrace; J. A. Thompson, 5 Spottiswoode Street. *Secretaries*—A. G. Watson, 19 Gillespie Crescent; Geo. Salmon, 12 Warrender Park Terrace. *Treasurer*—John M'Murray, 9 Spottiswoode Street.

The Society meets every Saturday evening during the Winter Session, at 7 o'clock, in the Public Law Class-Room.

vii.—Free Church Students' Society. Instituted 1886. Office-Bearers for Session 1899-1900:—*Hon. President* Rev. John Kelman, M.A. *Senior President*—Mr T. Gray Philip. *Junior President*—Mr Henry Spiers. *Secretaries*—Messrs D. C. Davidson and D. B. Nicoll. *Treasurer*—Mr A. J. Sturrock.

The Society is open to all past and present Free Church Students of the University of Edinburgh, and meets in the Elocution Class Room, New College, Mound, every Saturday evening during the Winter Session, at 7 o'clock. Subscription for Membership, 2s.

viii.—Edinburgh University Musical Society. Founded 1866-67.—*Patron*—H.R.H. The Reigning Duke of Saxe-Coburg and Gotha (The Duke of Edinburgh). *President*—Professor Niecks. *Vice-Presidents*—Principal Sir Wm. Muir, K.C.S.I.; Professors Annandale, Armstrong, Crum Brown, Butcher, Flint, Kirkpatrick, and Pringle Pattison; Emeritus-Professors Sir Douglas Maclagan, Sir Herbert S. Oakeley; and D. Hepburn, M.D. *Hon. or Corresponding Vice-Presidents*—The President of Aberdeen University Musical Society; Professor Sir John Stainer, Oxford; Professor Villiers Stanford, Cambridge; and Professor Prout, Dublin. *Hon. Secretary*—R. C. Monnington, University Union. *Hon. Treasurer*—W. Cameron Sillar, M.B., B.Sc. *Conductor*—James A. Moonie. The Chorus (male and female) meets for practice weekly in the Music Class Room, Park Place, on Tuesdays, at 5.10 P.M. Subscription, 2s. 6d.

ix. — PHOTOGRAPHIC SOCIETY. — (*Office-Bearers not communicated.*) All past and present Students eligible. Monthly meetings in the University Union during sessions. Excursions in summer time.

x.—RIFLE COMPANY SHOOTING CLUB. INSTITUTED 1873.—*Honorary Presidents*—Lieut.-Colonel Sir Wm. Turner and Professor Balfour. *President*—Captain Hope. *Vice-President*—Lieutenants J. B. Jamieson, and R. Adams. *Secretary and Treasurer*—Lance-Corporal A. E. L. Jones, The Union. This Club is open to members of No. 4 (University) Company, Q.R.V.B., R.S. The Club superintends the shooting of the Company. Weekly competitions are held at Hunters' Bog, and an Annual Prize Competition in July, at which numerous prizes are given. A silver teaspoon is given for each weekly competition.

xi.—SCOTTISH INTER-UNIVERSITY RIFLE MATCH. INSTITUTED 1880.—*Edinburgh Committee*—Captain J. A. Hope; Colour-Sergeant Grey; Sergeant A. N. Bond, Q.R.V.B.; Sergeant A. C. Balfour; Bombardier Straithairn, E.C.V.A.; Staff-Sergeant G. M. Pratt, V.M.S.C. *Hon. Secretary*—Colour-Sergeant Gavin Grey, Q.R.V.B., University Union. The Inter-University Challenge Trophy is shot for annually by the four Scottish Universities in rotation, at Edinburgh, Glasgow, Montrose, and Aberdeen. Each University sends a team of ten men, of whom at least five must be matriculated students at the date of the match, and the remainder must have attended a class in the University for at least one Session. Students willing to shoot are requested to communicate with the Secretary.

xii.—SHINTY CLUB.—*Captain*—J. J. Macpherson. *Vice-Captain*—Chas. Macpherson. *Secretary*—E. Ross.

The Club meets for practice during the Winter Session on Saturdays, at 1.30 P.M., at Inverleith Park.

xiii.—THEOLOGICAL SOCIETY. INSTITUTED 1776. — *Honorary Presidents*—Rev. Professor Flint, LL.D., D.D.; Rev. Professor Taylor, D.D.; Rev. Professor Kennedy, D.D.; Rev. Professor Patrick, D.D. *Presidents*—Bruce M'Ewen, M.A.; A. J. Campbell, B.A.; Donald Lamont; W. G. M'Kean. *Secretary*—William A. Curtis, M.A. *Treasurer*—J. K. Thomson.

This Society is open to present and past Students of any Theological Seminary. It meets every Friday evening during the Winter Session, at 8 P.M., for debates and discussions on questions of Theology, Church History, Biblical Criticism, General Ecclesiastical Polity, and kindred subjects.

xiv.—TOTAL ABSTINENCE SOCIETY. INSTITUTED 1853. Office-bearers for 1898-99:—*Honorary President*—Professor A. R. Simpson, M.D. *Honorary Vice-President*—Dr J. O. Affleck; Emeritus-Prof. Charteris; Dr T. Brown Darling; Charles J. Guthrie, Esq.; Dr J.

Shaw M'Laren; Dr A. G. Miller; R. L. Orr, Esq.; Dr P. A. Young. *Honorary Treasurer*—H. S. Hope Gill, C.A. *President*—G. A. Paulin. *Vice-President*—James Miller, B.Sc. *Secretaries*—Miss Agnes M. Hamilton, 12 Chalmers Street; Y. Fukuda, 4 Bernard Terrace. *Treasurer*—David Robertson, 8 Marchmont Crescent.

The condition of membership is total abstinence for the current academic year, "ab Octobre ad Octobrem." All Students who are abstainers are eligible as members. Annual Subscription, 1s. (voluntary).

XV. UNIVERSITY BATTERY, E.C.V. ARTILLERY.—*Captain*—H. Overton Hobson. *Lieutenant*—J. Carruthers. *Sergeant-Major*—C. J. Lauchlan. *Sergeants*—F. A. Gray, H. M. Mackenzie, J. P. Lavery, A. C. Balfour. *Hon. Secretary and Treasurer*—Bombardier P. F. M'Farlan, University Union.

XVI. — UNIVERSITY CHRISTIAN ASSOCIATIONS. — The Medical Students' Christian Association, the Arts Students' Christian Association, and the Missionary Association send representatives to a Central Committee, whose work consists in arranging general students' meetings on Sunday evenings during the Winter Session, and in organising Christian work in the University generally. *Secretary*—Charles H. Müller, c/o Gowdy, 78 Marchmont Road.

(1.) ARTS STUDENTS' CHRISTIAN ASSOCIATION. *Hon. President*—Professor Kennedy. *Hon. Vice-Presidents*—Principal Sir William Muir, Professor Butcher, Professor Hardie, Emeritus-Professor Charteris, Dr Knott, Dr Barbour, Dr Maurice Paterson, Rev. George Wilson, Rev. Dr John Smith, Rev. R. S. Simpson, Rev. George Jackson, Rev. John Kelman. *President*—C. W. G. Taylor. *Secretaries*—W. Greig Alexander, 42 Albany Street, Leith, and C. L. Hunter. *Treasurer*—J. M. B. Duncan, 22 Blantyre Terrace.

The objects of the Association are—(1) To form a bond of union between men whose principle and aim in life is Christian; (2) To promote Social intercourse; (3) To give University men an opportunity of engaging in Christian work; (4) To foster study of the Bible and of Christian Missions.

(WOMEN'S BRANCH.)

Honorary President—Miss Louisa Stevenson. *President*—Miss Hogg. *Vice-Presidents*—Miss Williamson; Miss I. W. Stevenson. *General Secretary*—Miss Lees. *Treasurer*—Miss Porter.

All communications to be addressed to the Secretary, The Mission Hall.

The work is carried on by means of weekly meetings for Bible and Missionary study, and other social and religious meetings.

Membership is open to all Matriculated women students of the University of Edinburgh, present and past, the annual subscription being 1s.

(2.) MEDICAL STUDENTS' CHRISTIAN ASSOCIATION. *Honorary President*—Professor Hunter Stewart. *Honorary Vice-Presidents*—Professors Sir Thomas Grainger Stewart, M.D.; A. R. Simpson, M.D.; John Chiene, M.D.; Crum Brown, M.D.; Emer.-Prof. Sir D. Maclagan; Drs J. O. Affleck; J. W. Ballantyne; A. H. F. Barbour; R. A. Fleming; James Ritchie; P. A. Young; Mr C. W. Cathcart; Mr J. Shaw Maclaren; Mr A. G. Miller. *President*—H. Crichton Miller, M.A. *General Secretaries*—Douglas E. Derry, The Union; L. T. Price, 18 Westhall Gardens. *Treasurer*—Arthur Dangerfield.

The OBJECT of the Association is to form a bond of union between Medical Students *whose principles and aims in life are Christian.* Short services are held in all the wards of the Royal Infirmary on Sunday (9.30-10), by those who are willing to do so, after which there is a meeting—to which *all* Medical Students are invited—in the Chapel of the Royal Infirmary, from 10.5 to 10.30, conducted by Medical men and Senior Students.

Daily Prayer Meetings are held in the Chemistry Library, lasting for a quarter of an hour, in winter at 8.40, 9.40, and 1, and in summer at 11.40, 1, and 2.

(3.) MISSIONARY ASSOCIATION. INSTITUTED 1825.—*Honorary President*—Principal Sir W. Muir, K.C.S.I., D.C.L. *Hon. Vice-Presidents*—Lord Balfour of Burleigh (Lord Rector), Professors Patrick, Kennedy, and Seth Pringle Pattison. *Honorary Treasurer*—W. Melville Sym, Esq., C.A. *President*—W. G. MacKean. *Vice-President*—J. Black, M.A. *Secretary*—H. C. Duncan, M.A. *Assistant Secretary*—W. A. Curtis, M.A. *Assistant Treasurer*—Richard Bell, M.A. *Librarian*—Bruce M'Ewen, M.A.

The Association meets to transact business in the Public Law Class-Room on alternate Saturdays, at 10 A.M.

xvii.—UNIVERSITY U.P. STUDENTS' SOCIETY. INSTITUTED 1843. —*Honorary Presidents*—Professor Crum Brown, M.D., LL.D.; Rev. John Hutchison, D.D.; Rev. A. B. Cameron, D.D.; Rev. J. W. Dunbar, M.A. *President*—Jas. Murray. *Vice-Presidents*—D. K. Bogie, R. G. Paterson. *Secretary*—J. R. Hutton, c/o Paterson, 47 Warrender Park Rd. *Treasurer*—James Reid.

The Society meets every Saturday evening during the Winter Session, in the College Buildings, Castle Terrace, at 7 o'clock.

xviii.—STUDENTS' VOLUNTEER MISSIONARY UNION (Edinburgh Branch).—The ranks of this Association are open to all Students who look forward to engaging in Foreign Missionary Work, and who sign the declaration of the Union—"It is my purpose, if God permit, to become a foreign Missionary." Its objects are to band such students together and to bring the claims of the Foreign Mission Field before other Christian Students. It seeks to promote systematic study

of Missions and arranges for a monthly Missionary Meeting during the Winter Session. A fortnightly meeting of Members is also held.

President—H. C. Duncan, M.A. *Secretary*—J. M. B. Duncan, 22 Blantyre Terrace. *Librarian*—H. M. Newton. *Treasurer*—Y. Fukuda, 4 Bernard Terrace.

xix.—Women's Debating Society. Instituted 1893.—*President*—Marion J. Gray. *Vice-Presidents*—Chrystal MacMillan, B.Sc., and Elizabeth Pagan. *Secretary*—Mary G. Williamson, 21 Ravelston Park. *Treasurer*—Elizabeth C. Faill.

The Society meets every alternate Friday during the Winter Session, at 5 P.M., within the University, for Debate and Literary Criticism.

RESIDENCES AND BOARD FOR STUDENTS.

(*Not under the control of the University Authorities.*)

I. For Men Students.

(1.)—University Hall, St Giles' House (22 St Giles' Street); Riddle's Court (5 Victoria Terrace); Ramsay Lodge (Ramsay Garden); and Blackie House (8 North Bank Street). University Hall is designed as a social residence for Students, Graduates, and others connected with the University. The above houses are all within five minutes' walk of the University; they include common rooms, private studies, and bedrooms. The rents range from 8s. to 18s. per week, and the board from 12s. to 14s. per week, payable by term or fortnightly, in advance.

The external affairs of the Hall are in the hands of The Town and Gown Association, Limited.

The internal arrangements of each house are managed by a committee of the residents elected monthly. When desired, young Students can be placed under the care of one of the resident tutors, the Rev. H. H. Flower, Pittodrie House, Ramsay Garden, and others. In some of the chambers and larger houses occupied by teachers, graduates, &c., Students can be received as pupils and boarders.

Application for rooms should be made at the different houses. Application for information with regard to general questions on University Hall should be made to Messrs Whitson & Methuen, C.A., 26 Hill Street, Edinburgh.

(2.)—2 Ramsay Garden. The Rev. A. T. Bell receives Students as boarders, the number being limited to six. Special supervision can be given and tuition arranged for, if desired. Application for particulars, terms, references, &c., to be made to Mr Bell.

II. For Women Students.

(1.)—Masson Hall, 31 George Square. Instituted 1897.—*Hon. President*—Principal Sir William Muir, K.C.S.I. *President*—Miss Houldsworth. *Hon. Treasurer*—Miss S. E. S. Mair. *Warden*—Miss F. H. Simson, M.A. *Hon. Secretary*—Miss Louisa Stevenson, 13 Randolph Crescent, Edinburgh.

This Hall is situated in convenient proximity to the University and Medical Schools.

Non-resident students may become members of the Hall by a small annual subscription, and have access to the Library and to the Dining-Hall where meals are provided at moderate rates.

Terms for Board and Residence may be had on application to the Warden, or to the Hon. Secretary. A room for Students' Meetings can be provided by arrangement.

(2.)—The Muir Hall for Students of Medicine, 12 George Square.—*President*—Sir William Muir, K.C.S.I. *Vice-Presidents*—Mrs Findlay of Aberlour; Rt. Hon. Lord Pearson. *Honorary Treasurer*—Mrs Marcus Dods. *Honorary Secretary*—Miss Inglis, L.R.C.P. and S.E. *Lady Superintendent*—Miss Robertson.

The Hall is managed by a Lady Superintendent, is under the direction of a Committee of Management, and contains two Common Rooms, besides Private Rooms for Residents, and Bath Rooms on each Floor. The Private Rooms are arranged as Study Bedrooms, and the charge varies according to the size and outlook, from 16s. 6d. to 25s. a week, including Board. Students who remain for examination after the Session has ended are charged 1s. 6d. a week extra. Half Rents during the Christmas and Spring Vacations, to Residents who wish to retain their Rooms. The Residents have the use of the Square Gardens, where there are Tennis Courts. For particulars apply to the Lady Superintendent.

General Index.

Arranged as far as possible under Faculties.

PAGE

Academic Costume 30
Accounts, University, Abstract of 849
Addresses of Professors xxix
,, Emeriti Professors.....xxx
,, Professors resigned ...xxx
,, Lecturers.....xxxi
Agricultural Society.....872
Appeal for Funds.....xxxiii
Army, Examinations for.....869
Arts, Faculty of 2, 18, 58
Academic Year 105
Advice to Students regarding Curricula 104
Boards of Studies.....112
Bursaries in Arts and Conditions of Tenure[1]—
Allan (65) 158
Angus Club (45) 157
Ardvorlich (42) 157
Argyllshire (41).....157
Ayrshire (32) 156
Baxter of Balgavies (75) 158
Blair (25) 156
Border Association and Sir Walter Scott (40).....157
Brown (15).....156
Bruce (29).....156
Bryson (13) 155
Buchanan.....196
Caithness Assoc. (34).....156
Callander and Trossachs (76) 158, 194
Chrystie (12).....155
County Club and Private Bursaries.....191, 192
Cousin (72).....158
Cowan (43) 157
Dalgliesh and Macmorran (8) 155
Dow (24) 156

PAGE

Arts, Faculty of—
Bursaries—
Dundas (17).....156
East Lothian (54) 157
Assoc. for Univ. Education of Women.....195
Muir 196
Victoria Jubilee 195
Zetland 195
Fairbairn (66) 158
Ford (10).....155
Fotheringham and Forrest (52) 157
Fraser (18) 156
Fraser (Donald) (74).....158, 193
Gillan (55) 157
Glenbuck (68).....158
Grant (21) 156
Grierson (47) 157, 192, 193
Harrison (38).....157, 197
Heriot (1).....155, 194
Heriot (for Women).....155, 194
Heriot (for Women studying Medicine) 155, 194
Heriot St Geo. Training College 155, 194
Heriot High School (1)..155, 194
Horsfield-Scott (37).....157, 197
Hume (19).....156
Jamieson (26).....156
Jardine (Bidder) (27).....156
Jardine (Thorlieshope) (67) 158, 193
Johnston, A. (2) 155
Johnstone, R. (5, 6) 155
Johnstone of Harthope (49) 157, 193
Lambert (50).....157
Lanarkshire (48) 157

[1] The figures in parentheses refer to the numbers of the Foundations.

PAGE

Arts, Faculty of—
Bursaries—
Lennie (28) 156
M'Diarmid (30) 156
Macdougall (62) 157, 195
Mackenzie (69) 158
Mackinnon (59) 157, 193
Maclaurin (70) 158
Mann (64) 158, 192
Marshall (51) 157
Maule (73) 158, 193
Menzies (23) 156
Millar (20) 156
Mitchell and Short (16) 156
Newton (63) 158
Orkney and Zetland (46) 157
Patrick (31) 156
Patterson (57) 157, 197
Peeblesshire (33) 156
Penman, J. (9) 155
Pringle and Wardrop (14) 155
Private Bursaries 192
Ramsay (11) 155
Renton (61) 157, 193
Rhind (65) 157
Sibbald (44) 157, 192
Simson (71) 158, 195
Spence (39) 157, 197
St George's Classes 196
Stuart (22) 156, 194
Thomson (66) 157, 192
Town Council Bursaries 191
Trotter and Penman (3) 155
Tyndall Bruce (36) 157, 192, 196
University Endowment 192
Weir, Jenkins, Hepburn, and Lightbody (7) 155
Welsh, John (Carlyle) (58) 157, 192
Whitelaw (60) 157
Wight, M'Call, and Christie (4) 155
Zetland, Earl of (53) 157, 196
Honours List for Bursaries, 1898 147
Exam. Papers for 489
Additional Papers 555
Open 1899-1900 190
Payable by Factor 198
Classes, Programme of, and Fees 58
Class Prize and Honour Lists 439

PAGE

Arts, Faculty of—
Courses in Arts—
Astronomy 97
Botany 97
Celtic 79
Chemistry 97
Classical Archaeology 71, 101
Dynamics 95
Education 85
English 72
Fine Art 101
French 74
Geology 97
German 76
Greek 68
Hebrew and Semitic Languages 79
History, British 98
,, Constitutional 102
,, Ecclesiastical 102
,, Roman 102
Italian 75
Latin 65
Logic and Metaphysics 80
Mathematics 89
Moral Philosophy 82
Natural Philosophy 92, 96
Natural Theology 88
Philosophy of Law 87
Physics (Experimental) 96
Political Economy 84
Public International Law 103
Sanskrit and Comparative Philology 78
Zoology 97
Curriculum 105
,, for Women 114
Period of Study 105
Preliminary Examination 105
Fee, Dates of Entering, and Time-Tables for Preliminary 121
Preliminary Exam. papers 489
Joint Board of Examiners 429
Additional Regulns. by Joint Board for Preliminary 429
Exams. accepted as equivalent for Preliminary 432
Ordinary Degree of M.A. 108
Boards of Studies 112
Fees for Exams. 124

PAGE

Arts, Faculty of—
Curriculum—
Dates of entering for Exams. 124
Time-Table of Exams.....126
Outline of Examinations.....128
Examination Papers.....585
Honours Degree 109
,, Outline of Exams. .136
,, Examin. Papers 642
Graduates in 1898-99 152
,, with Honours, Lists of 150
Sponsio Academica 150
Special Study and Research 115
Higher Degrees 117
D. Litt 119
D. Phil. 118
D. Sc. 117
Conferred 149
Fellowships—
Guthrie 184
Hamilton 184, 187
Heriot 185, 187
Shaw 184
Swiney Lect. in Geology.....186
Open in 1899-1900.....187
Payment of.....198
Prizes—
Bruce.....169, 189
Cousin.....170, 189
Dickson Travelling Fund 185, 189
Edinburgh University Club (London).....169
Franco-Scottish Society.....190
Gray..... .....170, 189
Hamilton 189
Kelland.....170, 190
Moray Bequest for Research 186, 189
Neil Arnott.....189
Newton (64 190
Rector's.....169, 189
Scott and Dunbar.....170, 189
Open in 1899-1900.....189
Payment of.....198
Scholarships—
Arnott, Neil.....175, 189
Baxter (Sir D.), Mathematics 171, 187
Philosophical 172
Baxter (J. E.) in Classics ...172

PAGE

Arts, Faculty of—
Scholarships—
Baxter in Mental Philosophy 172, 187
in Mathematics 172
Bruce, Classics.....173
,, Mental Philosophy..173
,, Mathematics 173
Drummond 172, 187
Dunlop, Vans.....176
Ferguson 176, 189
Fettes Exhibitions.....174
Gilchrist.....174
Gray 174
Heriot Travelling in Mod. Languages 183, 188
Lang.....181
Mackay Smith 181, 189
Mackenzie 171
MacLaren.....175
Macpherson.....182, 188
Nichol 182
Pitt Club.....171
Rhind 174
Ritchie 182, 189
Scott 181, 189
Skirving 180
Vans Dunlop Gen. Regs. 176
Classics 177, 188
Commer. & Pol. Econ. 178
English Lit. and Poetry 177, 187
Hebrew 179
History 180
Logic and Metaphysics 178, 188
Mathematics 179
Moral Philosophy.....180
Nat. Philosophy.....179
Sanskrit, &c.....180
Vacant 1899-1900.....187
Payable by Factor.....198
Schoolmaster's Diploma.....145
Exam. Papers for.....623
Diplomas conferred, 1898-99...154
Arts' Students' Christian Asso...876
Assessors.....1, 14
Assistants, University..... 5
Associated Societies.....872
Association for better endowment of the University 871
Athletic Club.....873
Auditor 1

PAGE

Benefactors of University 835
,, Portraits and Busts of 53
Bequests and Donations during 1898-99.....846
Boards of Studies.....112
Botanic Garden, Royal 57
Buildings, University 34
Bursaries. *See* under the various Faculties.

Caithness Society.....873
Calendar, University .....xiii-xxvii
Celtic Society.....873
Ceremon., Ann. Graduation, &c. 30
Chairs 2
Chancellor.....1, 10
Charter of University..... 10
Chemical Society.....874
Church of Scot., curriculum for.869
Civil Service Commission Examinations..... 109
Classes, Programmes of—
Arts..... 58
Divinity 277
Law 302
Medicine 327
Music 422
Science 199
Opening of New..... 33
Classical Library 53
Clerk.....1, 9
Clerks, Assistant.....1, 9
Clerk of Works..... 9
Clubs, University.....872
Costume, University 30
Copying at Exams., Penalties for 39
Council, General, of the University 9, 25
,, Gen. Med., Representative in 16
,, Students' Representative.....26
Courses of Lectures. *See* under the various Faculties.
Court, University 1, 12, 31
,, Regulations of 31
,, Abstract of Proceedings of...860
Curators of Patronage 2, 15
Curricula—
Arts 108
Divinity 284
Law 308
Medicine..... .....354, 383

PAGE

Curricula—
Music 423
Science.....229, 243, 249, 254

Deans of Faculties.....2, 3, 4
Degrees *in Arts* Regulations for.105
Classes..... 58
Outline of Exams.....128, 136
Examination Papers for...585, 642
conferred, 1898-99.....153
,, *in Divinity*—
Classes.....277
(B.D.), Regulations 284
Subjects of Exam. 285
Examination Papers for ...776
conferred, 1898-99.....287
(D.D.) honorary 287
,, *in Law*.....308
Classes. 289
(LL.B.) Regulations for...308
B.L. Regulations 310
Subjects of Exam.....311
Dates of Examination.....313
conferred, 1898-99....315, 316
Exam. Papers.....787
(LL.D.) honorary.....316
,, *in Medicine*—
Classes..... 327
Regulations (for M.B., Ch.B., M.D., Ch.M.)....354
Preliminary Examination 353
Papers for 571
Professional Exams.....360
Papers for.....798
conferred in 1898-99 391, 398, 399
,, *in Music*—
Classes 422
Regulations for Degrees...423
conferred in 1899.....427
Examination Papers.....812
Hon. Mus. Doc.....425
,, *in Science*—
Classes 199
Regulations 229
Outline of Examinations...238
Examination Papers.....742
conferred in 1898-99.....266
Diagnostic Society.....873
Dialectic Society..... 872

PAGE
Dickson, W., Travel. Fund 185, 187
Diplomas, Cost of—
Arts....124
Divinity, B.D....286
Law, LL.B., B.L....312
Medicine....375, 386
Music....426
Science....261
Discipline....30
Divinity, Faculty of—
Bursaries and conditions of tenure[1]—
Alexander (3)....289
Bayne (1)....293, 299
Blair (4, 5)....289
Buchanan (1)....290, 299
Ettles (5)....290, 299
Grant (1)....294
Grierson (6)....290, 299
Hepburn (10, 11, 12)....290, 300
Hunter 14)....290, 301
Jamieson (2)....294
King William (4)....290, 301
Lockerby (16)....290
Maclaurin (4)....294
M'Lurg and Penman (2) 289, 299
Mylne (9)....290
Nairne, A. (1)....289
Nairne, J. 2)....293, 299
Ramsay (3)....290
Renton (13)....290
Sharp (17)....290
Sibbald (3)....294
Simson (15)....290, 300
Struthers and Leighton (2)..290
Thomson (8)....290, 299
Webster (7....290, 299
Open in 1899-1900....299
Class and Prize Lists....455
Classes, Programme of....277
Courses....279
Arabic....281
Biblical Criticism and Biblical Antiquities....283
Divinity....279
Ecclesiastical History....282
Hebrew....280
Natural Science, Gunning Lectureship in....284

PAGE
Divinity, Faculty of—
Courses—
Natural Theology, Gifford Lectures in....283
Syriac....282
Curriculum....284
Graduation in....284
Subjects of Examination....285
Time-Table of Examinations and dates of Entering....286
Examination Papers....776
Fees for B.D....286
Graduates, 1898-99....287
Hon. Graduates, List of (D.D.) 287
Prizes—
Barty Memorial....294, 300
Dickson Travelling Fund....185
Gray....301
Gunning....294
Hepburn....294, 300
Moray Bequest for Research 186
Rector's....301
Open in 1899-1900....299
Scholarships—
Aitken....296
Bruce....297
Cobb....298, 299
Glover....296, 300
Gray....298
Jeffrey....298, 300
Kidd....297
Maxton....296
Pitt Club....295
Vans Dunlop, in Hebrew, &c. 297
in History....297
Open in 1899-1900....299
Donations and Bequests during 1898-99....846
Dumfries and Galloway Lit. Soc..874

Endowments, University....854
Association for better Endowment of University....871
Entrance Fee....29
Exams., Outline of Subjects of—
Arts....128
Divinity....285
Law....311
Medicine....372

[1] The figures in parentheses refer to the numbers of the Foundation.

PAGE

Examinations, Outline of Subjects of—
Music 424
Preliminary.....105, 423
Science 238
,, Dates of entering for and payment of Fees for Preliminary Examination and for Examinations for Degrees—
Arts 121
Divinity 286
Law.....313
Medicine 375, 383
Music.....426
Preliminary.....121, 367
Science 262
Examination Papers—
Preliminary 189
Bursaries 489
Arts 585, 642
Divinity 776
Law 787
Medicine 798
Music 812
Science 742
Schoolmaster's Diploma.....623
Examiners for Degrees 6, 30
Appointment of..... 32
Absence of..... 32
Examinerships, Applications for 32
Extra-Academical Lecturers, Rules for Recognition of..... 33
,, recognised by University Court 379

Faculties 2, 3, 4, 18
Arts 2, 18
Divinity 3, 21
Law.....3, 22
Medicine.....4, 23
Music 4, 24
Science.....3, 20
Factor for University..... 1
Fees for Classes—
Arts..... 58
Divinity 289
Law.....302
Medicine.....327
Music.....422
Science 199

PAGE

Fees for Degrees, &c.—
Arts.....124
Divinity 286
Law 312
Medicine.....375, 386
Music.....426
Science 261
Schoolmaster's Diploma 146
for Laboratory Work..60, 205, 332
General Council..... 25
Entrance 29
Fellowships. *See* under the various Faculties.
Foundations, New. 829
Fraser, Professorship of Ancient History and Palaeography, Deed of Foundation.....830
Free Church Society. 874
Funds, Univ. Statement of.....849

Gen. Council of the Univer. 9, 25
Geology, Swiney Lectureship in..274
Gifford Lectures on Natural Theology.....88, 283
Gold Medallists.....390
Graduation, Regulations for—
Arts 105
Divinity 284
Law 308
Medicine (New).....354
(Old).....383
Music.....423
Science.....227
Ceremonials, Precedence at.... 30
Gunning Lect. in Nat. Sc.....284

Honorary Degrees in—
Divinity 287
Law.....316
Music.....427

Income and Expenditure of University 849
India, Civil Service Com. Exams.109
Inter-Academic Committee 871
Inter-Univ. (Scottish) Rifle Match 875

Janitor..... 9
Joint Board of Examiners for Preliminary Examination 429

PAGE

Keepers of Museums..... 9

Laboratories –
Anatomy.....205, 332
Astronomy.....65, 205
Botanical.....205, 332
Chemical.....205, 332
Engineering.....204
Forensic Medicine.....333
Geological.....204
Materia Medica.....333
Natural History.....205, 333
Obstetrical and Gynecological.....332
Pathological.....333
Physical.....65, 204, 332
Physiological.....205, 332
Practice of Physic.....332
Public Health.....205, 333
Surgical.....333
Fees.....35, 205, 332

Law, Faculty of—
Bursaries and conditions of tenure.....320
Allan (5).....321
Baxter of Balgavies (65).....158
Cairns (2).....320, 325
Grant (1).....321
Grierson (1).....320, 325
Jamieson (2).....321
Maclaurin (3).....321
Renton (4).....321, 325
Sibbald (3).....321, 325
Thomson (3).....320, 325
Open in 1899-1900.....325
Classes, Programme of.....302
Class and Honours Lists.....457
Courses.....303
Civil Law.....303
Comml. and Political Econ. and Mercantile Law.....307
Constitutional Law and History.....305
Conveyancing.....304
Forensic Medicine.....307
International Private Law 307
Procedure and Law of Evidence.....308
Public Law.....305
Scots Law.....303

PAGE

Law, Faculty of—
Graduation, Regulations for...308
LL.B.....308
B.L.....310
Prelim. Exam. for B.L.....311
Outline of Examinations for LL.B. and B.L.....311
Dates of Entry for Exams. and payment of Fees.....313
Examination Papers.....489, 787
Fees for Degrees.....312
Graduates, LL.B.....314
,, B.L.....315
Hon. Graduates, LL.D.....316
Prizes—
Dickson Travel. Fund...185, 325
Forensic.....324, 325
Gray.....189
Moray Bequest for Research 186, 325
Muirhead.....324
Rector's.....189
Open in 1899-1900.....325
Payable by Factor.....326
Scholarships—
Gray.....323
Lorimer.....323, 325
Thow.....323, 325, 829
Vans Dunlop Scholarships—
Commercial and Political Economy and Mercantile Law.....321
History.....322
Law of Nature and Nations, Civil Law and Const. Law and History.....322
Scots Law and Conveyancing.....322, 324
Scholarships, Prizes, and Bursaries Open in 1899-1900...324

Lecturers, University.....xxxi, 4
,, Absence of..... 31
,, Extra-Academical, recognised 379
,, Regs. for recognition of..... 33
Lectureships, University..... 4
Applied Mathematics..... 5
Agricultural Chemistry..... 5
Agricultural Entomology..... 5
Chemical Theory..... 5
Diseases of Children..... 5

PAGE

Lectureships—
- Diseases of the Eye.... 5
- Diseases of the Larynx, Ear, and Nose.... 5
- Diseases of the Skin.... 5
- Diseases of Tropical Climates.. 5
- Embryology.... 5
- Experimental Pharmacology... 5
- Experimental Physiology.... 5
- Forestry.... 5
- French Language, &c.... 5
- Geomet. and Mechan. Drawing.... 5
- German Language, &c.... 5
- Gifford.... 5
- Greek.... 5
- Gunning.... 5
- International Private Law.... 5
- Latin.... 4
- Logic, &c.... 5
- Mathematics.... 5
- Moral Philosophy.... 5
- Mental Diseases.... 5
- Mineralogy and Crystallography.... 5
- Natural Philosophy.... 5
- Pathological Bacteriology.... 5
- Petrology.... 5
- Physiology (Advanced).... 5
- Physiological Chemistry.... 5
- Plant Physiology.... 5
- Procedure and Evidence.... 5
- Regiona Anatomy.... 5
- Rhet. and English Lit.... 4
- Swiney.... 274

Librarian, University.... 9

Librarians, Assistant.... 9

Library, University.... 41
- Regulations.... 43
- Use of.... 45
- Reading-Rooms.... 50
- Donations and Bequests.... 847

Library, Theological.... 51
- Sellar and Goodhart Classical 52
- History.... 53
- Philosophical Honours, &c.... 52

"M'Ewan University Hall".... 39

Masson Hall.... 879

PAGE

Matriculation.... 27
- Sponsio Academica.... 28
- Fees.... 27

Medical Council, Representative in.... 16

Medical Society, Royal.... 871

Medical Students' Christian Association.... 877

Medicine, Faculty of.... 325
- Bursaries and conditions of tenure [1]—
  - Abercromby (1).... 411
  - Allan (14).... 411
  - Anderson (8).... 411
  - Baxter of Balgavies.... 186
  - Carlyle, J. A. (7).... 411
  - Crichton (10).... 411
  - Grant (11).... 411
  - Grierson (4).... 411
  - Heriot (9).... 411
  - Jamieson (12).... 411
  - M'Cosh (16, 17).... 411
  - Mackenzie (6).... 411
  - Mackie (3).... 411
  - Maclaurin (15).... 411
  - Renton (13).... 411
  - Sibbald (2).... 411
  - Thomson (5).... 411
- Open in 1899-1900.... 419
- Classes.... 327
  - ,, attendance at.... 330
- Class Exams., Regulations for. 370
  - ,, Attendance.... 371
- Class Prize Lists.... 459
- Courses in.... 334
  - Anatomy.... 338
    - ,, Practical.... 338
    - ,, Regional.... 339
  - Botany.... 334
    - ,, Practical.... 334
  - Chemistry.... 336
    - ,, Practical.... 337
  - Clinical Medicine.... 350
    - ,, ,, Tutorial.... 351
  - Clinical Surgery.... 349
    - ,, ,, Tutorial.... 350
  - Comparative Embryology.... 336
  - Disease in Children.... 352
  - Diseases of the Eye.... 347

[1] The figures in parentheses refer to the numbers of the Foundations.

PAGE

Medicine, Faculty of—
Courses in—
Diseases of Larynx, Ear, and Nose 348
,, Tropical Climates 346
,, Skin 351
Forensic Medicine 343
Materia Medica.....341
,, Practical.....341
,, Research Labor.342
Medicine.....344
Mental Diseases 345
Midwifery 348
Pathology.....342
,, Practical.. 343
Pathological Bacteriology...343
Pharmacology Experimental 342
Physics 337
Physiology.....339
,, Practical.....340
,, ,, (Advanced)340
Physiological Research.....341
Public Health 344
Surgery 346
Vertebrate Morphology.....336
Zoology 335
,, Practical.....335
Zoological Research.....336
Curriculum, Minimum for Degrees in.....368
Extra Academical Teachers recognised.....379
Fees for Exams.....375, 386
Fellowships—
Allan.....403, 418, 833
Dickson Travelling Fund 185, 404
Freeland-Barbour 403, 418
Goodsir 402
Leckie-Mactier.....403
Moray Bequest for Research 186, 404, 419
Syme.. 402
Open in 1899-1900.....418
Prelim. Exam. in.....353, 434
Papers for 571
Exams. exempting from.....435
Time-Table and dates of Entry 375
Professional Education (New Regulations) 354

PAGE

Medicine, Faculty of—
Professional Education (Old Regulations) 383
Prof. Exams., Regulations for M.B. 360
Honours in.....374
Time-Table and Dates of entering 376
Exam. for M.D. 362
,, M.D.(Old).....385
,, Ch.M. 364
Regulations for Research, &c. 387
Papers for Prof. Exams. 798
Graduation in 353
Graduation of Women 365
Graduates in, with Hon....395, 397
Graduates in, in 1898-99....390, 398
M.D. Gold Medallists.....390
M.D., 1898-99 391
D.Sc., Regulations for.....388
Prizes—
Anderson-Henry.....417, 420
Beaney 416
Cameron.....416
Dickson Travelling Fund.....404
Dobbie-Smith 417
Ellis 415
Gold Medals for M.D. Theses 416
Gray 189
Gunning 417
Milner Fothergill.....418
Moray Bequest for Research 101
Neil Arnott.....415
Pattison.....418
Rector's 189
Wightman.....416
Wilson.....415
Open in 1899-1900 420
Scholarships—
Buchanan 408, 419
Coldstream Memorial 405
Crichton.....410, 419
Ettles 404, 419
Hope Prize.....409, 419
Houldsworth 410, 419
Mackay Smith 410, 419
Mouat.....409, 419
Murchison.....408, 419
Scott 409, 419
Sibbald 404, 419

PAGE

Medicine, Faculty of—
Scholarships—
Stark 408, 419
Thomson 405
Vans Dunlop 405
Anatomy and Physiology 407, 419
Botany and Zoology 406
Chemistry, Anatomy, and Physics 406
Materia Medica.....407, 419
Pathology and Medical Jurisprudence and Pub. Health 407, 419
Physiology and Surgery...406
Preliminary Subjects.....406
Open in 1899-1900.....419
Research, Regulations for...387
Sponsio.....374
Medical Students, Registrn. of...368
Missionary Association 877
Moray Endowment for Research 404
Muir Hall.....879
Museums..... 55
Anatomical..... 55
Botanic 55, 57
Chemistry..... 56
Fine Art..... 55
Geological..... 55
Materia Medica..... 57
Music..... 55
Natural History 56
Natural Philosophy 55
Obstetrical..... 56
Physiological..... 55
Practice of Physic..... 55
Surgery..... 57
Keepers of..... 9
Music, Faculty of.....4, 24, 423
Programme of Classes and Fees.....422
Prize Lists 487
Graduation in 423
Honorary Mus.D. 425
Graduates, 1899 127
Exam. Papers for Degrees.....112
Prelim. Exam. 125, 126
Dates of entering for Exams. and payment of Fees.....426
Scholarship in 427
Musical Society, University.....874

PAGE

New Foundations 829

Officials of University.....1
Organist, University 9

Parliamentary Representative 1, 12
Patrons of Chairs.....2, 14, 15
Penalties for Breach of Discipline 30
Philomathic Society 873
Philosophical Hons. Library..... 52
Photographic Society 875
Portraits and Busts of Professors and Benefactors 53
Precedence of Faculties..... 30
Preliminary Examination...105, 353, 429, 432
Examinations exempting from 432, 434
Principal 1, 16
Prize Lists, 1898-99
Arts.....439
Divinity 455
Law 457
Medicine 459
Music.....487
Science.....453
Prizes. *See* under Faculties.
Professors, Addresses of..... xxix
Absence of, Regulations for.... 31

Reading Rooms, Old Buildings... 50
,, New Buildings 51
Rector of University.....1, 11
Rectorial Election, Statistics of...870
Registrar Univ. Gen. Council.... 9
Registn. of Members of Council.. 25
Reid School of Music..... 41
Representative in Parliament...1, 12
Research, Regs. for Special Study and 115
Residence and Board—
For Men Students 878
For Women Students.....879
Rifle Shooting Club.....875
Rioters Connect. Penalties for... 30
Royal Medical Society.....871
Royal Botanic Garden..... 57

Scholarships. *See* under the various Faculties.

PAGE
Schoolmaster's Diploma, Regulations for....145
Papers for....623
Science, Faculty of—
Bursaries and Conditions of Tenure—
Buchanan....275
Baxter of Balgavies....169
Fraser....275
Grant....160
Heriot....275
Jamieson....156
Renton....275
Sibbald....275
Town Council....275
Vacant in 1899-1900....275
Class, Prize, and Honours Lists 453
Classes, Programme of....199
Courses in Pure Science—
Astronomy....208
,, Practical....209
Botany....207
Chemistry....208
Dynamics....207
Embryology....206
Geology, including Mineralogy....210
Human Anatomy, including Anthropology....209
Mathematics....206
Mineralogy, &c. (Advanced) 208
Morphology of Vertebrata...207
Natural Philosophy....207
Petrology....212
Physics (Advanced Experimental)....207
Physiology....209
,, (Adv. Practical)....209
Plant Physiology....207
Zoology....206
Courses in Applied Science....213
Agriculture, &c....221
Agricultural Chemistry....223
Agricultural Entomology....224
Drawing and Mensuration 212, 220
Dynamics....216
Economics bearing on Agriculture....226
Engineering....213

PAGE
Science, Faculty of—
Courses in Engineering Field Work....215
Sanitary, &c....220
Experimental Physics....227
Forestry....226
Physics....219
Public Health....219
Fevers, &c....220
Laboratory Work....216
Sanitation....219
Veterinary Hygiene....224
Fellowships—
Falconer....267
Heriot....268, 274
Open in 1899-1900....274
Prizes—
Dickson Travelling Fund 185, 275
Dobbie-Smith....417
Ellis....415
Gray....276
Gunning Victoria....417
Kelland....275
Moray Bequest for Research 186, 275
Newton....275
Rector's....275
Open in 1899-1900....275
Scholarships—
Arnott....271, 275
Baxter (Sir D.)—
Natural Science....268, 274
Physical Science....268, 274
Baxter of Balgavies....273, 275
Gray....273
Hope Prize....271, 275
Mackay Smith—
Chemistry....271, 275
Natural Philosophy..271, 275
Physical Science (Exhibition of 1851)....272, 274
Steven....270, 275
Geology, Swiney Lectureship in....274
Trevelyan....272 275
Vans Dunlop—
Agriculture....269
Chemistry....270, 274
Engineering....270, 274
Mathematics....269

PAGE

Science, Faculty of—
Vans Dunlop Scholarships—
Natural History, including Geol. and Bot. 270
Natural Philosophy 269
Open 1899-1900.....274
Graduation in Pure Science 227
Preliminary Examination....227
Curriculum in 229
Examinations for B.Sc.....231
Courses for Final Exam.....232
Special Study and Research, Regulations for.....235
Research Fellows.....236
D.Sc., Regulations for.....233
Graduation of Women 236
Outline of Examinations.....238
Fees.....261
Time-Table and dates of Entering for Exams.....262
Engineering, Regs. for B.Sc.—
Preliminary Examination....243
Courses of Instruction.....243
Examinations.....245
D.Sc., Regulations for 246
Outline of Examinations.....247
Fees.....261
Dates of Examinations.....262
Public Health, Regs. for B.Sc.—
Curriculum 249
Laboratory Work 251
Regulations for D.Sc.....253
Fees.....261
Dates of Examinations.....262
Agriculture, B.Sc.—
Preliminary Examination....254
Courses of Instruction.....254
Examinations 256
Outline of Examinations 257
Fees for Examinations.....261
Dates of Examinations.....262
Examination Papers—
Preliminary 489
Pure Science 742, 748
Engineering.....742, 759
Public Health 745, 766
Agriculture 770
D.Sc., List of. 265
Degrees conferred, 1898-99.....266
Scots Law Society.....873
Senatus Academicus.....xxix, 2, 17

PAGE

Scottish Inter-University Rifle Match Competition 875
Shinty Club.....875
Societies, University, and Clubs 872
,, Associated..... 872
Sponsio Academica on Matriculation 28
for Graduates in Arts.....150
for Graduates in Med.....374
Students, Matriculated, Number of..... 29
Representative Council.....26
Residences and Board.....
1. For Men Students— University Hall, &c.....878
2. For Women Students.....879
(1) Masson Hall.....879
(2) Muir Hall 879
Swiney Lectureship in Geology 274

Teachers, Recognition of Extra Academical..... 33
,, Recognised Extra Academical 379
Theological Library..... 51
Theological Society.....875
Torrie Fine Art Collection..... 54
Total Abstinence Society.....875

University Assistants 5
,, Battery 876
,, Buildings..... 34
,, Christian Associations 876
,, Committee of Privy Council.. 15
,, Constitution..... 10
,, Court.....1, 12, 31
,, Curators.....2, 15
,, Union, ...870
University Endowment Association 871
,, Requirements of xxxiii
,, Examiners for Degrees, &c. 6, 30
,, Library 41
,, Lecturers..... 4
,, ,, Addresses of xxxi
,, "M'Ewan Hall"..... 39
,, Organist..... 9
,, Professors.....2, 18
,, ,, Addresses of xxix

PAGE

University Professors, Addresses of Emeriti and Resigned Professors xxx
,, Representative in Gen. Med. Council..... 16
U.P. Students' Society.....877
Vice-Chancellor.....1, 11
Volunteer Missionary Union.....877

Warders..... 9
Women's Debating Society.....878
Women Students, Residences for 879

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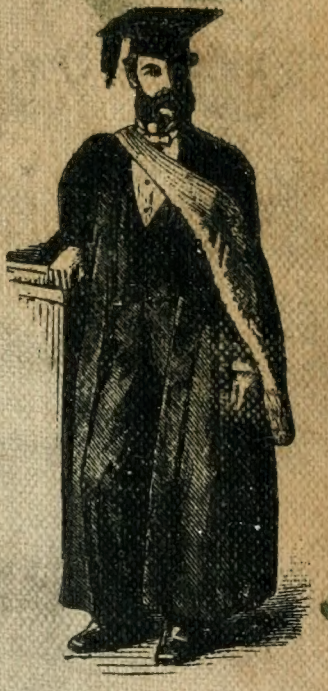

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